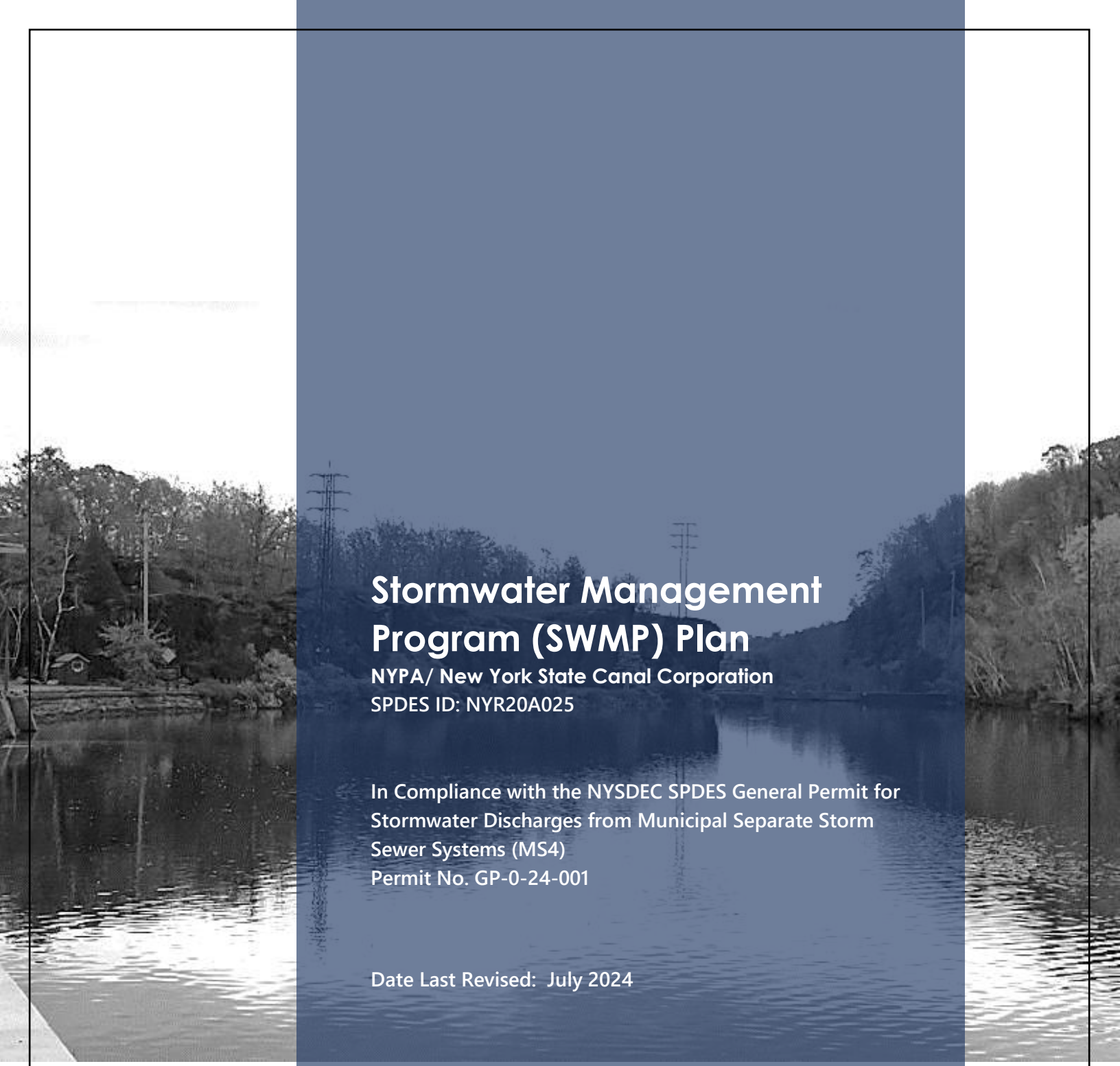

Stormwater Management Program (SWMP) Plan

NYPA/ New York State Canal Corporation
SPDES ID: NYR20A025

In Compliance with the NYSDEC SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4)
Permit No. GP-0-24-001

Date Last Revised: July 2024

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

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Transportation Maintenance Engineer (TME)	Signature	Date
Regional Canal Engineer	Signature	Date

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1 Program Overview

Small municipal separate stormwater sewer systems (MS4s) that are located within the boundaries of an urbanized area, as defined by the US Census Bureau, are regulated under the US Environmental Protection Agency's (EPA) Phase II Stormwater Rule of the National Pollutant Discharge Elimination System (NPDES) permit program.

To implement the federal law, New York State regulates stormwater as part of the State Pollutant Discharge Elimination System (SPDES) permit program. There are a variety of permit programs under the SPDES umbrella. General stormwater discharges from MS4s in urbanized or additionally designated areas must be authorized in accordance with the *SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (*MS4s) GP-0-24-001 (MS4 General Permit). This permit became effective January 3, 2024 and expires on January 2, 2029.

The Phase II Stormwater Rule and MS4 General Permit require MS4 Operators to develop a stormwater management program (SWMP) which includes six minimum control measures (MCMs) that, when implemented together, are expected to reduce the discharge of pollutants to the maximum extent practicable. The goal of the program is to improve water quality and recreational use of waterways. The document is intended to serve as the SMWP Plan, required by the MS4 General Permit.

1.1 Permit Authorization

The New York State Canal Corporation (NYSCC) is a subsidiary of the New York Power Authority (NYPA) and oversees the operation, maintenance, and promotion of the 524-mile New York State Canal System. As a state agency, it is considered a non-traditional MS4 operator that owns and operates lands and facilities across New York State.

1.1.1 Designated Areas

Only portions of the MS4 which are located within the automatically or additionally designated areas are subject to, and authorized to discharge by, the requirements of the MS4 General Permit. The majority of the Downstate region is located within an automatically designated area. In the Upstate region, MS4 areas are generally surrounding larger metropolitan areas including:

- **Buffalo**
- **Rochester**
- **Syracuse**
- **Utica**
- **Albany**
- Saratoga Springs
- **Glens Falls**
- Watertown
- Fort Drum
- Elmira
- **Ithaca**
- Binghamton

The **bolded** names indicate areas where NYSCC has lands within automatically or additionally designated areas and MS4 regulations apply. These areas are also depicted in Figure 1-1

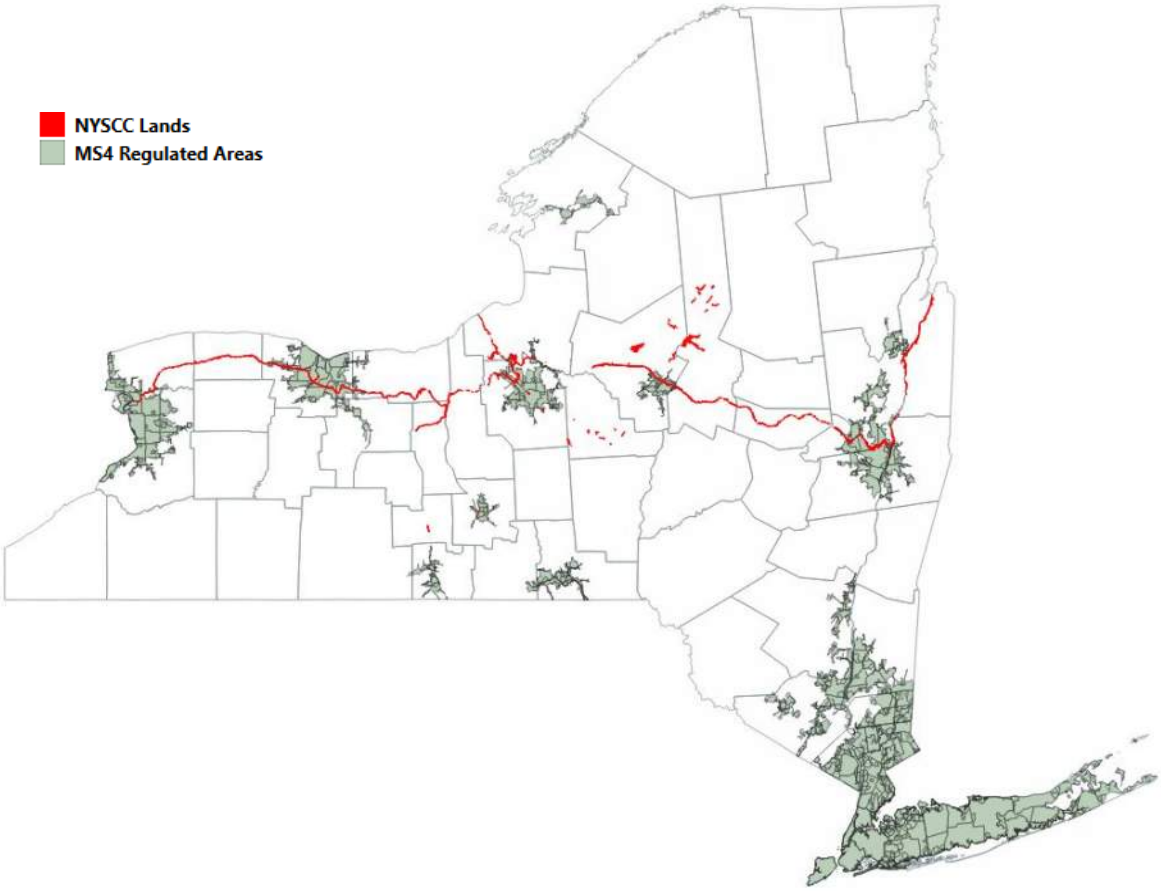


Figure 1-1: NYSCC Lands and MS4 Regulated Areas

1.1.2 Authorized Non-Stormwater Discharges

Non-stormwater discharges through outfalls are authorized by the MS4 General Permit, provided that they do not violate the Environmental Conservation Law (ECL) and the water quality standards set by the State. Non-stormwater discharges may include:

- Discharges from firefighting activities during an emergency
- Hydrant flushings
- Waterline flushings
- Irrigation drainage
- Lawn watering
- Uncontaminated infiltration and inflow
- Leakage from raw water conveyance systems
- Routine external building wash down and vehicle washing which does not use detergents or other compounds
- Pavement wash waters where spills or leaks of toxic of hazardous materials, other than minor and routine releases from motor vehicles, have not occurred (unless such material has been removed) and where detergents have not been used
- Air conditioning and steam condensate
- Springs
- Uncontaminated groundwater
- Foundation or footing drains

If the discharge is in violation of the State water quality standards, the MS4 Operator must eliminate the discharge by following the illicit discharge MCM requirements found in Section 4.

1.2 Notice of Intent

A Notice of Intent (NOI) for coverage under the MS4 General Permit was submitted to NYSDEC on March 12, 2024. A copy of the electronic submission is included in **Appendix A**.

Table 1-1: MS4 General Permit Applicability

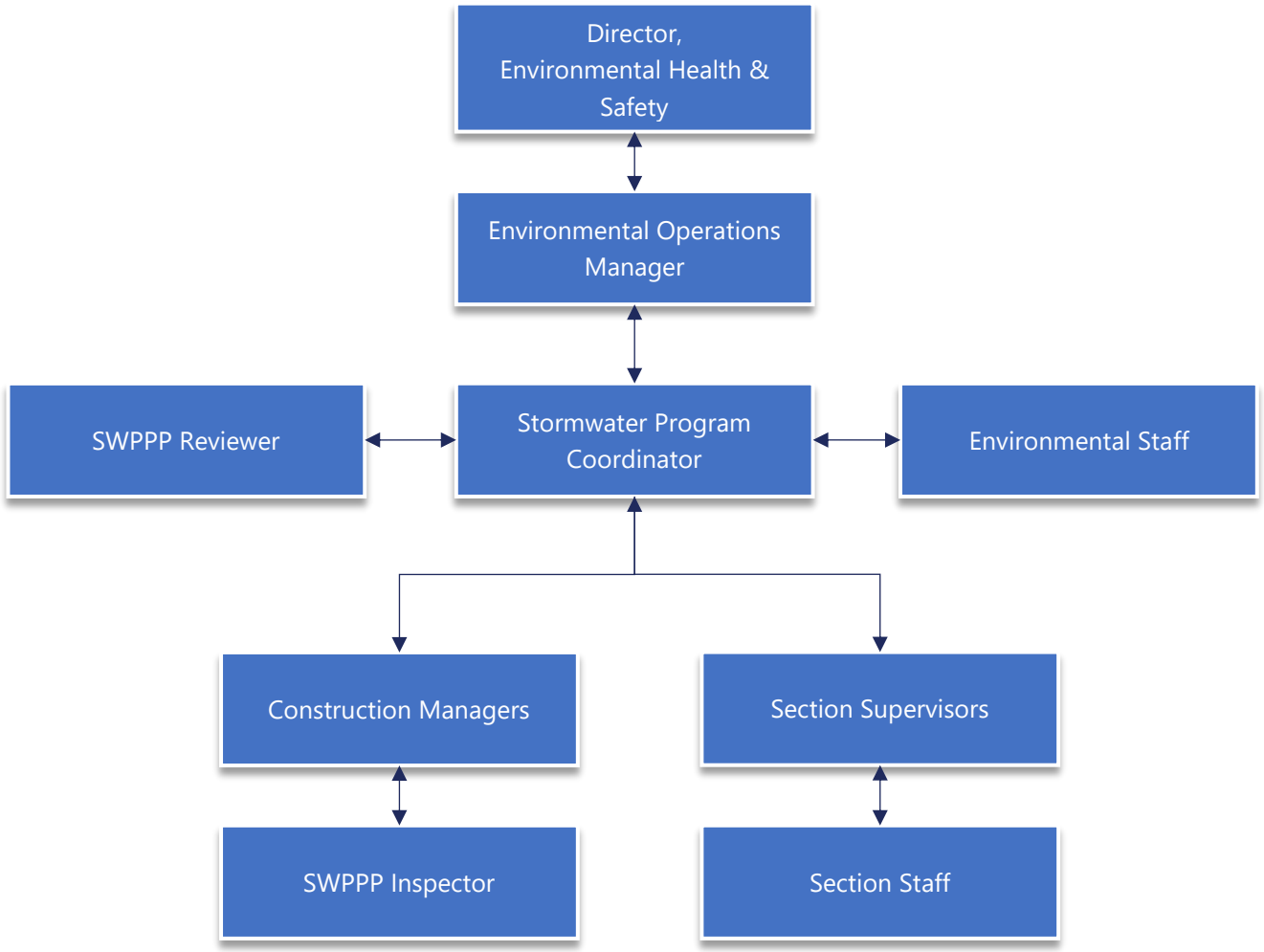
Section	Applicability	Reasoning
VI. MCMs for Traditional Land Use Control MS4 Operators	Does Not Apply	NYSCC is a non-traditional MS4 operator (state agency)
VII. MCMs for Traditional Non-Land Use Control & Non-Traditional MS4 Operators	Applies	NYSCC is a non-traditional MS4 operator (state agency)
VIII. Enhanced Requirements for Impaired Waters	Does Not Apply	NYSCC does not have any lands discharging to designated Impaired Waters
IX. Watershed Improvement Strategy Requirements for TMDL Implementation	Does Not Apply	NYSCC does not have any land use control over lands discharging to designated watersheds

1.3 Staffing Plan

The MS4 program is operated through NYSCC Environmental Health & Safety Division; however, all NYSCC employees play a role in the overall implementation of the program. All NYSCC staff are responsible for understanding their role and how they need to implement various aspects of the SWMP in their daily activities.

The organization chart shown in Figure 1-2 depicts the general roles and responsibilities of various NYSCC staff as it relates to the MS4 program. Table 1-2 provides the specific contact information for the current key points of contact for the MS4 program administration.

Figure 1-2: NYSCC MS4 Staffing Organizational Chart



Roll	Responsibilities
Director, Environmental, Health & Safety	Responsible for program compliance
Environmental Operations Manager	Responsible for program administration
Stormwater Program Coordinator	Responsible for program implementation, tracking, reporting, and coordination
SWPPP Reviewer	Review and submit SWPPPs to NYSDEC
Environmental Staff	Enable the program at all levels
Construction Managers	Responsible for SWPPP implementation on construction sites
SWPPP Inspectors	Responsible for SWPPP inspections and ensuring deficiencies have been corrected
Section Supervisors	Responsible for all training, monitoring, reporting, and implementation of SWMP within each Section
Section Staff	Responsible for SWMP compliance and reporting deficiencies to Section Supervisor

Table 1-2: Staffing Plan

Name / Title	Contact Information	Role
James Candiloro, PE Director, Environmental Health & Safety	30 South Pearl Street Albany NY 12207 james.cadiloro@nypa.gov (518) 433-6841 (office)	Review and sign Annual Reports
Justin Bills Manager Environmental Operations Program	30 South Pearl Street Albany NY 12207 justin.bills@nypa.gov (518) 433-6774 (office) (518) 807-2516 (cell)	Review Annual Reports
Aaron Gorges Environmental Engineer II	149 Northern Concourse, Suite 400 North Syracuse, NY 13212 aaron.gorges@nypa.gov (518) 312-9497 (cell)	Stormwater Program Coordinator Develop and submit Annual Reports
Jamie Verrigni, P.E. Environmental Engineer	30 South Pearl Street Albany, NY 12207 518-275-5569 (C) jamie.verrigni@canals.ny.gov	SWPPP Reviewer

1.3.1 Stormwater Program Coordinator

NYSCC must designate a Stormwater Program Coordinator who is knowledgeable in the principles and practices of stormwater management, the requirements of the SPDES general permit, and the SWMP. The Stormwater Program Coordinator oversees the development, implementation, and enforcement of the SWMP; coordinates all elements of the SWMP to ensure compliance with this SPDES general permit; and develops and submits the Annual Report (Part V.B.2.). The name, title, and contact information of the Stormwater Program Coordinator are provided in Table 1-3 below.

Table 1-3: Designated Stormwater Program Coordinator

Name / Title	Contact Information
Aaron Gorges Environmental Engineer II	149 Northern Concourse, Suite 400 North Syracuse, NY 13212 aaron.gorges@nypa.gov (518) 312-9497 (cell)

1.4 Legal Authority

Pursuant to § 10 of Canal Law, NYSCC is charged with supervision of the canal system. This responsibility includes, among other things, a requirement to "keep and maintain in good condition the canals, canal terminals and corporation equipment used in the maintenance and repair of the canal system." CAL § 10(8).

Notwithstanding this broad responsibility, NYSCC recognizes certain limits to its legal authority. For example, NYSCC lacks authority to regulate statewide environmental resources, such as regulating air and water quality or protecting threatened and endangered species. Regulatory jurisdiction for those resources lies with other agencies, including the New York State Department of Environmental Conservation (DEC) and local municipalities with delegated enforcement responsibility, the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and the U.S. Department of the Interior. In order to fulfill its general mandate, NYSCC recognizes the need to comply with all applicable regulatory requirements from those agencies and also to assist, where possible, in promoting compliance by reporting known or suspected violations that may affect the canal system and exploring measures to discourage violations.

1.5 SWMP Plan

1.5.1 Availability of SWMP

This document is intended to serve as the SWMP for the NYSCC. The SWMP is a living document and encompasses GIS mapping, tracking reports, training materials, and other reports and inspection forms that are referenced throughout this document. These items are all included within the SWMP by reference and may not be physically included in the document.

The SWMP will be made available to the public annually for review at the following website:

https://www.canals.ny.gov/Operations-and-Public-Projects/Environmental-Stewardship#municipal-separate-storm-sewer-systems-ms4s-3

Additionally, the SWMP and all associated material are available to all NYSCC staff responsible for implementation of the SWMP as well as NYSDEC and EPA staff by contacting the NYSCC MS4 Stormwater Program Coordinator.

1.5.2 SWMP Evaluation

As part of the implementation of the MS4 program, the SWMP will be annually reviewed for the items outlined in Table 7-5 or others as deemed necessary.

In accordance with the General Permit requirements, the entire SWMP will be re-evaluated at least once every five (5) years, to coincide with the General Permit renewal. The SWMP was most recently re-evaluated in July 2024. The next full evaluation will be by July 2029.

Table 1-4: SWMP Full Evaluation Tracking

SWMP Full Evaluation	
☒	July 2024
☐	July 2029

1.6 Enforcement Measures and Tracking

1.6.1 Enforcement Response Plan

An Enforcement Response Plan (ERP) has been developed for the NYSCC in accordance with the MS4 General Permit. The ERP outlines the actions available to NYSCC regarding water quality violations within the lands under NYSCC jurisdiction. The ERP can be found in **Appendix B**.

1.6.2 Enforcement Tracking

As outlined in the ERP, the NYSCC is required to track all formal enforcement actions, violations, and resolutions. For the purpose of this document, verbal warnings or informal communications regarding actions not violating water quality standards are not recorded. This information is recorded on the NYSCC MS4 Program Tracking Sheet held by the Stormwater Program Coordinator. This information will be included in the annual SWMP update and located in **Appendix C**.

1.7 Mapping

NYSCC is required to develop and maintain comprehensive system mapping of the MS4 system within the automatically designated areas under NYSCC jurisdiction. The mapping is to be completed in multiple phases:

1.7.1 Base Mapping

Base mapping includes information required under previous MS4 permit requirements. PDF versions of this mapping is included in **Appendix D**. NYSCC maintains the complete repository of this data on their internal GIS mapping system, which is incorporated to this SWMP by reference.

- MS4 Outfalls
- Interconnections
- Preliminary storm sewershed boundaries
- MS4 Areas
- Names, Locations, Classifications, Impairment Status of all Waters of the State
- TMDL Watersheds
- Land Use
- Roads
- Topography

1.7.2 Phase 1 Mapping

Phase 1 mapping expands upon the existing base mapping and includes:

- Monitoring locations with prioritization
- Focus areas
- Publicly owned/operated post-construction stormwater management practices
- Municipal facilities with prioritization

NYSCC has not completed Phase 1 Mapping. The Phase 1 mapping must be complete by January 3, 2027.

1.7.3 Phase 2 Mapping

Phase 2 mapping expands further upon the Phase 1 mapping and includes:

- MS4 infrastructure including
  - Conveyance system type and direction of flow.
  - Stormwater structures (e.g., drop inlet, catch basin, manhole) and number of connections
- Privately owned post-construction stormwater management practices

NYSCC has not completed Phase 2 Mapping. The Phase 2 mapping must be complete by January 3, 2029.

1.8 Reporting and Compliance Schedule

The following tables provide a brief summary of reporting and compliance schedules outlined in the General Permit. Additional information regarding the various activities may be found in the subsequent sections regarding each individual Minimum Control Measure (MCM).

Table 1-5: Reporting and Compliance Schedule

Permit Requirement	Schedule
Effective Date of Permit	January 3, 2024
Draft Annual Report Posted Online	March 1
Annual Report (Reporting period January 3 to January 2)	April 1
Interim Progress Certification 1 (Reporting period January 3 to June 30)	October 1
Interim Progress Certification 2 (July 1 through January 2)	April 1

Table 1-5: Reporting and Compliance Schedule

	Permit Requirement	Schedule
☒	Mapping of MS4 outfalls, interconnections, and preliminary storm sewersheds.	July 3, 2024
☒	Develop and implement an Enforcement Response Plan.	
☒	Illicit Discharge education materials must be made available to employees, business, and public.	
☒	Establish an email or phone number for the public to report complaints related to stormwater. Refer to **Section 4.1**	
☐	Develop and implement street sweeping plan. *(Not Applicable)*	
☒	Develop and implement a construction oversight program. Refer to **Section 5**	January 3, 2025
☒	Develop and implement a monitoring location inspection and sampling program. Refer to **Section 4.3**	January 3, 2026
☒	Develop and implement an illicit discharge track down program. Refer to **Section 4.4**	
☒	Develop and implement an illicit discharge elimination program. Refer to **Section 4.5**	
☐	Phase 1 Comprehensive System Mapping needs to be complete. Refer to **Section 4.2**	January 3, 2027
☒	Identify target audiences and public outreach and education topics for pollutant reduction within the SWMP. Refer to **Section 2.2**	
☒	Develop and maintain and inventory of all monitoring locations (MS4 outfalls, interconnections, municipal facility interconnections). Refer to **Section 4.2**	
☒	Prioritize all monitoring locations. Refer to **Section 4.2**	
☐	Ensure SWPPP reviewers receive four (4) hours of NYSDEC enforced erosion and sediment control training (Repeat every 3 Years). Refer to **Section 6.4**	
☐	Ensure NYSCC Construction Inspectors receive four (4) hours of NYSDEC enforced erosion and sediment control training (Repeat every 3 Years). Refer to **Section 5.4**	
☒	Develop a program and implement BMP measures at all municipal facilities. Refer to **Section 7.1**	
☒	Complete prioritization of all municipal facilities. Refer to **Section 7.1.1**	
☐	Develop municipal operations program. Refer to **Section 7.2**	
☐	Inventory each catch basin and develop catch basin maintenance program.	

Table 1-5: Reporting and Compliance Schedule

Permit Requirement		Schedule
☐	Phase 2 Comprehensive system mapping needs to be complete.	January 3, 2029
☐	Develop and implement a municipal facility specific SWPPP for each high priority municipal facility.	

Table 1-6: Items to be Conducted Once Every Five (5) Years

Items to Review		Completed
Re-evaluate SWMP (July 2029).		☐
MCM 1	Identify measures for distribution of education messages in SWMP.	☒
	Deliver an educational message to each target audience for each focus area.	☐
MCM 3	Dry weather inspection of each monitoring location.	☐
	Train staff on NYSCC monitoring locations inspection and sampling procedures	☐
	Train staff on illicit discharge track down procedures.	☐
	Train staff on illicit discharge elimination procedures.	☐
MCM 4	Train staff on construction oversight.	☐
MCM 5	Train staff on post-construction SMP inspection and maintenance procedures.	☐
MCM 6	Train staff on municipal facility procedures and BMPs.	☐
	Conduct wet weather visual monitoring of all monitoring locations and other locations of stormwater leaving the site of municipal facilities.	☐
	Complete a comprehensive site assessment for each municipal facility.	☐
	Train staff on municipal operations program procedures.	☐
	Sweep all roads, bridges, parking lots, and right of ways at least once.	☐
	Maintain all roadways.	☐

2 MCM 1 – Public Education and Outreach Program

Minimum Control Measure 1 (MCM 1) requires the MS4 Operator to develop and implement an education and outreach program to increase public awareness of pollutant generating activities and behaviors.

2.1 Focus Areas

The Canal System includes over 524-miles of canal waterways linking the Hudson River with the Great Lakes, the Finger Lakes, and Lake Champlain. Additionally, the lands include 365-miles of Canalway trails extending from Albany to Buffalo and Albany to Whitehall. The users of the Canal System are generally transient with activities that spread across watershed and jurisdictional boundaries. The NYSCC has had a long-standing outreach and education program targeting users and facilities across the state.

An update to the 2024 General Permit is to identify Focus Areas for consideration for the implementation of the outreach and education. The areas to consider include:

1. Areas discharging to water with Class AA-S, A-S, AA, A, B, SA, or SB;
2. Sewersheds for impaired waters listed in Appendix C of the General Permit,
3. TMDL watersheds;
4. Areas with construction activities;
5. Areas with on-site wastewater systems;
6. Residential, commercial, and industrial areas;
7. Stormwater hotspots; and
8. Areas with known illicit discharges.

Due to the transient and linear nature of the Canal system and the usage across watershed divides, targeting focus areas for Items 1 through 3 is impractical. While these areas have been mapped and are included in the NYSCC In-House GIS system and **Appendix D**; they are not considered for outreach and educational focus areas.

Additionally, as the NYSCC is publicly owned lands, the land usage is generally limited to open space. However, there are several maintenance facilities owned and operated by the NYSCC within the jurisdictional area. As such, focus areas within Items 6 and 7 is limited to those maintenance facilities. These facilities are also the targets for MCM 6 (Refer to **Section 7**).

Based on this evaluation, the NYSCC has identified the following as Focus Areas, as defined in the General Permit. Refer to NYSCC in-house GIS mapping and **Appendix D** for further details.

Table 2-1: Areas with Construction Activities – As of July 3, 2024 (To be Updated Annually)

Location / Waterbody	Facility or Use

Table 2-2: Areas with On-Site Wastewater Systems

Location / Waterbody	Facility or Use
Champlain Canal	Champlain 1 (C1)
Champlain Canal	Champlain 2 (C2)
Champlain Canal	Champlain 3 (C3)
Champlain Canal	Champlain 4 (C4)
Champlain Canal	Champlain 5 (C5)
Champlain Canal	Champlain 6 (C6)
Champlain Canal	Champlain 7 (C7)
Champlain Canal	Champlain 8 (C8)
Champlain Canal	Champlain 9 (C9)
Champlain Canal	Champlain 11 (C11)
Erie Canal	Waterford Mechanics Building
Erie Canal	Erie 3 (E3)
Erie Canal	Erie 4 (E4)
Erie Canal	Erie 5 (E5)
Erie Canal	Erie 6 (E6)
Mohawk River/Erie Canal	Erie 7 (E7)
Mohawk River/Erie Canal	Erie 8 (E8)
Mohawk River/Erie Canal	Erie 9 (E9)
Mohawk River/Erie Canal	Erie 10 (E10)
Mohawk River/Erie Canal	Erie 12 (E12)
Mohawk River/Erie Canal	Erie 13 (E13)
Mohawk River/Erie Canal	Erie 14 (E14)
Mohawk River/Erie Canal	Erie 15 (E15)
Erie Canal	Erie 16 (E16)
Erie Canal	Erie 17 (E17)
Erie Canal	Erie 18 (E18)
Erie Canal	Erie 19 (E19)
Erie Canal	Erie 20 (E20)
Erie Canal	Erie 21 (E21)
Erie Canal	Erie 22 (E22)

Table 2-2: Areas with On-Site Wastewater Systems

Location / Waterbody	Facility or Use
Erie Canal	Erie 23 (E23)
Erie Canal	Erie 25 (E25)
Erie Canal	Erie 26 (E26)
Erie Canal	Erie 27 (E27)
Erie Canal	Erie 28B (E28B)
Erie Canal	Erie 28A (E28A)
Erie Canal	Erie 29 (E29)
Erie Canal	Erie 30 (E30)
Oswego River	Oswego 1 (O1)
Oswego River	Oswego 2 (O2)
Oswego River	Oswego 6 (O6)
Oswego River	Oswego 8 (O8)
Cayuga Seneca Canal	Cayuga & Seneca 1 (CS1)
Cayuga Seneca Canal	Cayuga & Seneca 3 (CS3)

Table 2-3: Areas with Known Illicit Discharges -As of July 3, 2024 (To be Updated Annually)

Location / Waterbody	Facility or Use

2.2 Target Audiences and Associated Pollutant Generating Activities

As public lands with limited development, the target users, outside of the NYSCC staff, are generally transient. The Canal, trails, and parks invite a wide range of users that may pass through or make day visits to a particular area of the Canal System. The General Public is the primary target audience as daily users of the public lands. The public utilizes both the waterways and the adjacent land areas. As such, the following represents the identified target audiences and associated pollutant generating activities.

- **Hikers/Bikers/Trail & Park Users:**
    - Trash and Debris: Hikers, bikers, trail users and park goers generate trash including food waste, travel accessories, and other recreational materials. Whether left accidentally or on purpose, loose waste can make its way to the Canal and other waterbodies creating a water quality impairment.
    - Pet Waste: The open public lands are ideal for dog walking and in some areas, horse riding. Animal waste that is washed into lakes and streams often releases ammonia during composition. Additionally, the waste contains nutrients that encourage weed and algae growth.
- **Boaters / Canalway Users (Commercial and Recreational):**
    - Trash and Debris: Marine traffic can contribute to littering and the accumulation of trash and debris in water bodies. Plastic waste, in particular, poses a significant threat to marine life through ingestion and entanglement.
    - Oil and Fuel Spills: Accidental spills of oil and fuel can occur during refueling, maintenance, or as a result of engine leaks. These substances can float on the water surface, leading to pollution and harming aquatic life.
    - Bilge Water: Bilge water, which accumulates in the lowest part of a boat, can contain oil, fuel, and other contaminants. If not properly managed or treated, discharges of bilge water can introduce pollutants into the water.
    - Sewage and Graywater: Improperly treated sewage or discharge of graywater (from sinks, showers, etc.) from boats can introduce nutrients, pathogens, and other pollutants into the water, leading to water quality issues and potential health risks.
    - Boat Cleaning and Maintenance: Many boat cleaning and maintenance products contain chemicals that are poisonous, corrosive, flammable, and/or chemically reactive. Some products contain phosphorous and nitrogen that can further lead to water quality issues.
- **NYSCC Staff**
    - Maintenance Activities: Canals maintenance facilities (as identified in MCM 6) include a variety of potential pollutant generating activities such as soil stockpiling, vehicle maintenance, salt storage, and construction debris. Runoff from these maintenance facilities can carry water quality impairments. Refer to MCM 6 for further details.
- **Contractors & Design Professionals:**
    - Earth Disturbing Activities: Construction projects along the Canal may include construction of docks and moorings, dredging operations, embankment reconstruction, and other activities that involve disturbing the ground surface adjacent to the Canal and other waterways. Sediment laden runoff entering the waterways can create a water quality impairment.
    - Concrete Activities: Construction projects along the Canal may often include concrete operations for wall repair, grouting, and other measures. Concrete leachate can lead to water quality impairments.
    - Tree and Brush Removal: Clearing and grubbing of embankments along the Canal is integral to the protection and safety of the public. Proper disposal of the material in areas upland and away from waterbodies is necessary to minimize debris blockages within the waterbodies.

2.3 Education and Outreach Topics

The NYSCC has an evolving program of outreach and education related to stormwater management. The following documents some of the existing educational materials in use:

NYSCC Environmental Stewardship Website: https://www.canals.ny.gov/Operations-and-Public-Projects/Environmental-Stewardship#municipal-separate-storm-sewer-systems-ms4s-3

Target Audience Served: All.

Focus Areas Served: All.

General Contents: The website provides general information regarding the NYSCC Dredging Activities, Stormwater Management Plan, SWPPP requirements for construction, MS4 program, Connecting the Drops Campaign, which includes various brochures and flyers related to stormwater management and illicit discharges, as well as information regarding the "No Discharge Zone" for the Canal System and locations for marine sanitation devices and pump out stations.

Clean Sweep Events: https://www.ptny.org/events/canal-clean-sweep

Target Audience Served: Hikers/Bikers/Trail & Park Users

Focus Areas Served: All.

General Contents: Annually, NYSCC partners with local agencies such as Parks & Trails New York to sponsor a state-wide Canal Clean Sweep. The event occurs along major greenways across the state to celebrate Earth Day. The event not only acts as a mechanism for cleaning and maintaining the Canalways and trails, but educates participants about the amount of trash and debris accumulated throughout the year.

Canal Work & Occupancy Permits: https://www.canals.ny.gov/Real-Property-and-Permits/Permits

Target Audience Served: Contractors & Design Professionals, NYSCC Staff, General Public

Focus Areas Served: Construction Areas

General Contents: The Canal Work & Occupancy Permits, which are required to be authorized prior to any work being conducted on Canals land by an outside contractor adhere to the Design and Construction Requirements for Occupancies, TAYP-923A, TAP-923B, TAP-923C, and TAP-923D. These documents include references to environmental regulations including the NYSDEC SPDES Permit for Construction Activities, environmental protection requirements for various work activities, and proper use of canal lands.

NYSCC Standard Operating Procedures:

Target Audience Served: NYSCC Staff

Focus Areas Served: Maintenance Activities

General Contents: NYSCC maintains a series of Standard Operating Procedures (SOPs) for all NYSCC staff. These procedures document common best management practices, environmental, health, and safety actions, and other procedures that all Canal Staff need to be aware of and in compliance with. These SOPs are the backbone of the Facility Maintenance and Operations Programs outlined in Section 7. These documents are kept on internal NYSCC servers, accessible to all NYSCC staff. These SOPs are included in the SWMP by reference.

2.4 Illicit Discharge Education

NYSCC primary source for illicit discharge education to the public and staff is through the information posted on its environmental stewardship webpage. https://www.canals.ny.gov/Operations-and-Public-Projects/Environmental-Stewardship#municipal-separate-storm-sewer-systems-ms4s-3

NYSCC maintains a series of educational brochures, flyers, and pamphlets available for public use and education. These graphics are periodically updated. Some of these flyers are included in **Appendix E**.

2.5 Implementation, Frequency, and Updates

The NYSCC utilizes a variety of mechanisms for outreach and education including, but not limited to:

- NYSCC website:
- NYSCC Facebook Page: https://www.facebook.com/nycanals
- NYSCC Twitter Account: twitter.com/NYSCanalCorp
- Displays in Public Areas, including trail makers and kiosks.
- Printed Materials Available at Maintenance Facilities
- Educational events
- Real Property Review and Issuance

2.5.1 Update Log

Annually, the NYSCC must review and update the focus areas, target audiences, and education and outreach topics as described in this section. The table below documents the latest review status.

Table 2-4: SWMP Annual Review Measures

Items to Review		2024	2025	2026	2027	2028
MCM 1	Review and update the focus areas, target audiences, and/or education and outreach topics	☒	☐	☐	☐	☐

2.5.2 Implementation Log

Once every 5 years, the NYSCC must deliver an education message to each target audience for each focus area, as identified above. The following table documents the educational outreach conducted to date:

Table 2-5: Education and Outreach Tracking

Target User			Hikers/Bikers/ Trail & Park Users		Boaters / Canalway Users					NYSCC Staff	Contractors & Design Professionals		
Date of Distribution	Method of Distribution	Name	Trash & Debris	Pet Waste	Trash & Debris	Oil and Fuel Spills	Bilge Water	Sewage and Graywater	Boat Cleaning & Maintenance	Canal Maintenance Activities	Earth Disturbing Activities	Concrete Activities	Tree and Brush Removal
7/3/2024	Website	Environmental Stewardship	X	X	X	X	X	X	X	X	X	X	X
4/21/2024	Stewardship Event	Clean Sweep 2024	X	X									

3 MCM 2 – Public Involvement and Participation

Annually, the NYSCC must provide opportunities to involve the public in the development, review, and implementation of the SWMP. This section outlines the methods in place for public involvement and participation.

3.1 Opportunities

The following are known opportunities for public involvement:

Table 3-1: Opportunities for Public Involvement/Participation

Citizen Advisory Groups	NYSCC does not currently work with any citizen involvement groups regarding stormwater management.
Public Hearings or Meetings	NYSCC does not regularly hold public meetings or hearings.
Citizen Volunteers	There are various volunteer and interest groups along the entire Canal; however, NYSCC does not have any formal collaboration with these groups. NYSCC's Public Relations Department does have liaisons for outreach to these groups, as necessary.
Coordination with Other Pre-Existing Public Involvement / Participation Opportunities	None
Reporting Concerns	Community Hotline: • NYSCC has established a community hotline at **1-800-4-CANAL-4** for public questions, concerns, and comments. • NYSCC has an email address dedicated to stormwater concerns at: ms4arcanals@canals.ny.gov.
	Website Contacts: • NYSCC provides general email and phone contact information on their website. • The NYSCC Environmental Stewardship webpage provides an opportunity for public outreach, education, review of SWMP, annual reports, and other environmentally related concerns. https://www.canals.ny.gov/Operations-and-Public-Projects/Environmental-Stewardship#municipal-separate-storm-sewer-systems-ms4s-3
Stewardship Activities	Canal Clean Sweep • Canal Clean Sweep is an annual statewide clean-up event that occurs along major greenways across New York State to celebrate Earth Day. Many clean ups occur along NYSCC property, as NYSCC is a regular sponsor of the event. https://www.ptny.org/events/canal-clean-sweep

3.2 SWMP Development and Involvement

Annually, NYSCC must inform the public of the opportunity for their involvement and/or participation in the **development and implementation** of the SWMP and how they can become involved.

Table 3-2: SWMP Development and Involvement Notification Tracking

Date	Method of Distribution	Details
07/03/2024	Website	NYSCC Environmental Stewardship Page

3.3 SWMP & Annual Report Review and Comment

Annually, the NYSCC must provide the public an opportunity to review and comment on the SWMP Plan and the Annual Report. The public must have the ability to ask questions and submit comments on both documents. NYSCC makes the SWMP Plan and Annual Reports available, year-round, on the NYSCC Environmental Stewardship webpage at:

https://www.canals.ny.gov/Operations-and-Public-Projects/Environmental-Stewardship#municipal-separate-storm-sewer-systems-ms4s-3

The point of contact for all SWMP questions and comments is:

Table 3-3: Designated Stormwater Program Coordinator

Name / Title	Contact Information
Aaron Gorges Stormwater Program Coordinator	149 Northern Concourse, Suite 400 North Syracuse, NY 13212 ms4arcanals@canals.ny.gov.

Table 3-4: SWMP Public Review and Comment Notification Tracking

Date	Method of Distribution	Details
7/3/2024	Website	NYSCC Environmental Stewardship Page

Table 3-5: Annual Report Public Review and Comment Notification Tracking

Date	Method of Distribution	Details
TBD	Website	NYSCC Environmental Stewardship Page

A summary of all comments received regarding the general MS4 Program, the SWMP plan, and the Annual Report is documented in the NYSCC **MS4 Tracking Sheet** and in **Appendix F** (updated, at minimum, annually). The NYSCC must update the SWMP (NYSCC MS4 Tracking Form, by reference) within 30 days of when public comment is received.

3.4 Update Log

Items to Review		2024	2025	2026	2027	2028
MCM 2	Post the Draft Annual report on public website	☐	☐	☐	☐	☐
	Summarize comments and add to SWMP	☐	☐	☐	☐	☐
	Post the Updated SWMP on public website	☒	☐	☐	☐	☐

4 MCM 3 – Illicit Discharge Detection and Elimination

The purpose of this section is to document the program developed by NYSCC to systematically detect, track down, and eliminate illicit discharges within the MS4. This program is designed to manage the MS4 so that it is not conveying pollutants associated with flows other than those directly attributable to stormwater runoff.

4.1 Public Reporting Mechanism

NYSCC has established a community hotline at **1-800-4-CANAL-4** for public questions, concerns, and comments, including the public reporting of illicit discharges. NYSCC also has a designated email for stormwater related concerns at ms4arcanals@canals.ny.gov.

All reported illicit discharges are to be reported to the Stormwater Program Coordinator. Details of the reported illicit discharges are to be logged in the **MS4 Tracking Sheet**, included in this SWMP by reference, **within 30 days of reporting**.

Illicit discharge investigations shall follow the effective **Canal Directive (CD 2008-1) for Illicit Discharge Identification and Reporting Requirements,** as included in the internal Canals Governance Library, included by reference.

4.2 Monitoring Locations Inventory & Prioritization

In addition to public reporting of illicit discharges, the NYSCC is responsible for conducting routine inspections to detect illicit discharges at the various MS4 outfalls, interconnections, and municipal facility intraconnections, under its jurisdiction. NYSCC must develop an inventory of all outfalls, interconnections and municipal facility intraconnections to be included as monitoring locations. In addition, these monitoring locations must be prioritized as either high or low priority facilities, in accordance with the MS4 permit.

4.2.1 MS4 Outfalls

MS4 outfalls are defined as any point of stormwater discharge from the MS4 Operator's system to any surface water of the U.S.

NYSCC has mapped the outfalls within the designated urban areas of its jurisdiction. A summary of the MS4 outfalls is shown with more detailed information and mapping regarding these outfall locations is included in **Appendix D**. A complete inventory of the outfalls is included in the **MS4 Tracking Sheet** and associated GIS data, included in this SWMP by reference.

4.2.2 MS4 Interconnections

MS4 interconnections are defined as any point of stormwater discharge where flow from the MS4 Operator's system is discharging into another MS4 or private sewer system.

NYSCC has not completed an inventory of all MS4 interconnections. The inventory of the MS4 Interconnections must be complete by January 3, 2027.

4.2.3 MS4 Municipal Facility Intraconnections

MS4 municipal facility intraconnections are defined as any point where stormwater is conveyed from the MS4 Operator's municipal facility to the MS4 Operators own MS4 system (e.g., pipes, ditches, swales, etc.). This would also be the most downstream end of the MS4 infrastructure located within a municipal facility, prior to discharging to the MS4 system.

NYSCC has not completed an inventory of all MS4 municipal facility intraconnections. The inventory of the MS4 municipal facility intraconnections must be complete by January 3, 2027.

4.3 Monitoring Locations Inspection and Sampling Program

In accordance with the MS4 General Permit, the NYSCC must develop an Inspection and Sampling Program for all of the monitoring locations, as identified in Section 4.2. The following describes the procedures related to that program.

4.3.1 Dry Weather Inspections

Schedule

During dry weather, each of the monitoring locations must be inspected at least once every five years. In order to achieve this goal, the monitoring locations are divided into three Canal Sections – Buffalo, Syracuse, and Albany. It is assumed that all monitoring locations within one Section will be inspected each year. This will meet the minimum inspection requirements, allowing for slippage, or exceedance of the monitoring schedule.

Previous inspections have included:

- 2019 – Buffalo
- 2020 – Albany
- 2022 – Albany & Syracuse
- 2023 – Buffalo

Anticipated future inspections include:

- 2025 – Syracuse
- 2026 – Albany
- 2027 – Buffalo
- *2028 – Syracuse*
- *2029 - Albany*
- All locations must be inspected at least once by January 3, 2029

Annually, it will be the responsibility of the Stormwater Program Coordinator to coordinate inspections, either through an on-going environmental consultant term contract, or utilizing internal NYSCC staff.

In order to properly investigate illicit discharges, it is important to ensure that inspections are conducted in dry weather to eliminate the potential of stormwater masking or diluting illicit discharges. In order to do this, a minimum of 48 hrs needs to have passed between the end of the last rainfall in excess of 0.5-inches and the inspection. Multiple online resources can be used to determine previous rainfall events including the National Weather Service (www.weather.gov) and Weather Underground (www.wunderground.com).

Documentation

Inspections shall involve a site visit to each monitoring location. Procedures shall follow those outlined in the Center for Watershed Protection's *Illicit Discharge Detection and Elimination* Guidance Manual (CWP 2004) (https://owl.cwp.org/mdocs-posts/idde-guidance-manual/). The *Monitoring Locations Inspection and Sampling Field Sheet* (**Appendix G**) shall be used to document the conditions at each location. An electronic form containing the same information may be used in lieu of the paper forms, if available. Upon completion, all forms shall be submitted to the Stormwater Program Coordinator for inclusion in the MS4 electronic files, included in the SWMP, by reference.

Pursuant to **Canal Directive (CD) 2008-1 Illicit Discharge Identification and Reporting Requirements** – if any Canal employee identifies potential illicit discharge throughout of course of a normal work day, they are required to complete the form included in CD 2008-1 (**Appendix G**) and distribute to individuals as identified on the form for further follow-up and direction.

Classification

Each monitoring location will be classified based on the physical indicators present at the site. The following describes the follow up procedures based on the monitoring location classification.

Table 4-1: Monitoring Classification Procedures

Classification	Description	Next Steps
Unlikely Discharge	Non-flowing outfalls with no physical indicators of an illicit discharge	No follow up required.
Potential Discharge	Flowing or non-flowing outfalls with presence of two or more physical indicators	• Notify Stormwater Program Coordinator • Re-Inspect monitoring location **within thirty (30) days** of initial inspection if there is a physical indicator not related to flow, potentially indicative of intermittent or transitory discharges. • If the same physical indicators persist, upgrade monitoring location to "Suspect Discharge" and follow procedures.
Suspect Discharge	Flowing outfalls with high severity on one or more physical indicators	• Notify Stormwater Program Coordinator • If the source of the illicit discharge is unclear, collect a water sample to be submitted to a laboratory for testing or for field testing, in accordance with the provisions in CWP 2004. • **Within 5 days** of discovery, initiate track down procedures.

Table 4-1: Monitoring Classification Procedures

Classification	Description	Next Steps
Obvious Discharge	Outfalls where there is an illicit discharge that doesn't even require sample collection for confirmation	• Notify Stormwater Program Coordinator • **Within two (2) hrs** of discovery, initiate track down procedures for obvious illicit discharges of sanitary wastewater that would affect bathing areas during bathing season, shell fishing areas, or public water intakes. ○ Stormwater Program Coordinator must report orally or electronically to the NYSDEC Regional Water Engineer and Local Health Department • **Within twenty-four (24) hrs** of discovery, initiate track down procedures for all other illicit discharges. • If source of illicit discharge is unclear, collect a water sample to be submitted to a laboratory for testing in accordance with provisions in CWP 2004.

4.4 Illicit Discharge Track Down Program

Once an illicit discharge is found, a combination of methods can be used to isolate its specific source. Typical track down investigations procedures include:

- **Storm Drain Network Investigation**
  - Field crews strategically inspect manholes within the storm drain network system to measure chemical or physical indicators that can isolate discharges to a specific segment of the network. Once the pipe segment has been identified, on-site investigations are used to find the specific discharge or improper connection.
- **Drainage Area Investigation**
  - This method relies on an analysis of land use or other characteristics of the drainage area that is producing the illicit discharge. The investigation can be as simple as a "windshield" survey of the drainage area or a more complex mapping analysis of the storm drain network and potential generating sites. Drainage area investigations work best when prior indicator monitoring reveals strong clues as to the likely generating site producing the discharge. This analysis may be more feasible once the Phase 2 mapping of the MS4 system is complete.
- **On-Site Investigation**
  - On-site methods are used to trace the source of an illicit discharge in a pipe segment, and may involve dye, video, or smoke testing within isolated segments of the storm drain network.
- **Septic system Investigation**
  - Low-density residential watersheds may require special investigation methods if they are not served by sanitary sewers and/or storm water is conveyed in ditches or swales. The major illicit discharges round in low-density development are failing septic systems, surface inspections, and illegal dumping. Homeowner surveys, surface inspections, and infrared photography have all been effectively used to find failing septic systems in low-density watershed.

NYSCC staff shall work at the direction of the Stormwater Program Coordinator to devise the most appropriate track down method for the illicit discharge condition and location. A detailed description of track down methods is included in CWP 2004 (https://owl.cwp.org/mdocs-posts/idde-guidance-manual/) and should be referred to and followed for reference.

The majority of monitoring locations on NYSCC property have limited storm systems which can be physically investigated on NYSCC property. If it is suspected that the illicit discharge originates off of NYSCC property, the Stormwater Program Coordinator should notify the adjacent MS4 community for their assistance in continuing the track down within their MS4 system.

4.5 Illicit Discharge Elimination Program

4.5.1 Procedures

Once the source of the illicit discharge is identified, quick and efficient corrections should be implemented to correct the situation. The method of correction will vary depending on the type and severity of the source. The corrections will likely fall withing two categories:

1. Correction Measures **On** NYSCC Property. All areas within NYSCC property are under NYSCC jurisdiction. Coordination with various NYSCC departments may be required to implement necessary correction measures and infrastructure repairs, if necessary. The Stormwater Program Coordinator shall be responsible for coordinating correction measures and ensuring timely compliance.
2. Correction Measures **Off** NYSCC Property. If the source of the illicit discharge is identified at a location outside of NYSCC property, the Stormwater Program Coordinator will need to enact the procedures outlined in the **Enforcement Response Plan** included in **Appendix B**.

All correction measures and enforcement actions taken as a result of the **Enforcement Response Plan** and Illicit Discharge Elimination Program shall be documented in the **MS4 Tracking Sheet**, incorporated by reference.

Corrective measures shall be taken:

- Within **twenty-four (24) hrs** of identification of an illicit discharge that has a reasonable likelihood of adversely affecting human health of the environment.
- Within **five (5) days** of identification of all other illicit discharges.

In the event that the illicit discharge cannot be eliminated within the specified timeframes, the Stormwater Program Coordinator must notify the NYSDEC Regional Water Engineer.

4.6 Training

Training is an important part of maintaining an adequate Illicit Discharge Detection Elimination Program. The Stormwater Program Coordinator is responsible for coordinating training for:

- Monitoring Locations Inspection and Sampling Procedures
- Illicit Discharge Track Down Program
- Illicit Discharge Elimination Program

Training must be offered:

- For existing staff, prior to conducting work in either program, **once every five (5) years**,
- For new staff, prior to conducting work in either program,

- For all staff if the procedures related to any part of the Illicit Discharge Detection Elimination Program changes.

The Stormwater Program Coordinator is responsible for keeping track of the names, titles, and contact information for individuals who have received training. This information is included in the **MS4 Tracking Sheet**, included by reference.

4.7 Update Log

Table 4-2: SWMP Annual Review Measures

Items to Review		2024	2025	2026	2027	2028
MCM 3	Update Enforcement Actions log in **Appendix C**.	☒	☐	☐	☐	☐
	Update monitoring locations mapping in **Appendix D**	☒	☐	☐	☐	☐
	Update the monitoring location prioritization in **MS4 Tracking Sheet**.	☒	☐	☐	☐	☐
	Review and update monitoring locations inspection and sampling procedures.	☒	☐	☐	☐	☐
	Document individuals who have received illicit discharge track down procedures training	☐	☐	☐	☐	☐
	Review and update illicit discharge track down procedures	☒	☐	☐	☐	☐
	Document individuals who have received illicit discharge elimination procedures training.	☐	☐	☐	☐	☐
	Review and update illicit discharge elimination procedures	☒	☐	☐	☐	☐

5 MCM 4 – Construction Site Stormwater Runoff Control

In accordance with the MS4 Permit, the NYSCC must address stormwater runoff for all sites with construction activities permitted, approved, funded or owned/operated by the NYSCC that:

- Result in a total land disturbance of one (1) acre or more; or,
- Disturb less than one (1) acre, if part of a larger common plan of development or sale.

For all construction activities where the NYSCC is the owner/operator, the NYSCC must ensure the project is in compliance with the SPDES General Permit for Construction Activities.

5.1 Public Reporting Mechanism

NYSCC has established a community hotline at **1-800-4-CANAL-4** for public questions, concerns, and comments, including the public reporting of complaints related to construction stormwater activity. NYSCC also has a designated email for stormwater related concerns at ms4arcanals@canals.ny.gov.

All reported complaints are to be reported to the Stormwater Program Coordinator. Details of the reported illicit discharges are to be logged in the **MS4 Tracking Sheet,** included in this SWMP by reference, **within 30 days of reporting**.

5.2 Construction Oversight Program

The following outlines the required elements of the NYSCC Construction Oversight Program.

5.2.1 Applicability

NYSCC maintains oversight for all construction activities on NYSCC property. Activities may be classified into two categories:

1. NYSCC Lead Construction Projects – NYSCC, as the landowner and operator, conducts and oversees construction projects undertaking by its staff or on its behalf.
2. Third Party Construction Projects – All work being done by a third party on Canal lands. These operators must obtain Real Property Occupancy and/or Work Permits prior to commencing work.

It is extremely unlikely that a Third Party Construction Project would meet these requirements; therefore, the following is in regards to NYSCC Lead Construction Projects only. If a Third Party Construction Project does require a SWPPP, additional coordination with NYSCC will be required to determine specific project requirements.

5.2.2 SWPPP Requirements

A Stormwater Pollution Prevention Plan (SWPPP) is required for all projects that:

- Result in a total land disturbance of one (1) acre or more; or,
- Disturb less than one (1) acre, if part of a larger common plan of development or sale.

All SWPPPs must be prepared in accordance with the SPDES General Permit for Construction Activities.

Submission

SWPPPs shall be submitted to NYSCC electronically through the Project Manager. It will be the Project Manager's responsibility to transmit the SWPPP and all necessary materials to the Stormwater Program Coordinator for their review.

Reviews

All SWPPPs must be reviewed by the Stormwater Program Coordinator or a designated SWPPP reviewer. A **SWPPP Review Checklist** is included in **Appendix H** for reference.

The reviewer must review the SWPPP for conformance with the requirements of the most current version of the SPDES General Permit for Construction Activities, including:

- Erosion and sediment control measures in conformance with the *New York State Standards and Specifications for Erosion and Sediment Control* (NYS ESC 2016) or most current edition.
- Post-Construction stormwater management practices are designed in conformance with the *New York State Stormwater Management Design Manual* (NYSSMDM), most current edition.
    - Individuals reviewing post-construction stormwater management practices must be Qualified Professionals or under the supervision of Qualified Professionals, as defined by the SPDES General Permit for Construction Activities.
- Operation and Maintenance plans for all post-construction stormwater management practices.

5.2.3 Pre-Construction Oversight

All projects are required to have a pre-construction kick-off meeting. This meeting is coordinated by the NYSCC Project Manager. The Stormwater Program Coordinator or designee shall attend the meeting to discuss stormwater related items including:

- SWPPP on-site location
- Construction schedule
- Name and qualifications of Qualified Inspector
- All necessary points of contact
- Ensure all necessary forms are signed and included with SWPPP
    - MS4 Acceptance
    - DEC Permit Acknowledgement Letter
    - Notice of Intent
    - Owner Signature Page
    - SWPPP Preparer Page
    - Contractor/Subcontractor Certification Statements
    - Trained Contractor Certification Cards

A sample **Project Start Up Form** is included in **Appendix I**. The **Project Start Up Form** should be submitted to the Stormwater Program Coordinator and included in the electronic files for each project, included in this SWMP by reference.

5.2.4 Construction Site Inspection Requirements

Weekly Inspections

Projects that require a SWPPP must have weekly inspections by a Qualified Inspector. If the project exceeds 5 acres of disturbance, inspections must be completed twice per week, in accordance with the SPDES General Permit for Construction Activities. The Qualified Inspector is responsible for providing all inspections to the Stormwater Program Coordinator, or their designee for review. Inspections shall be provided in a timely manner.

Annual Inspections

At least once annually, the Stormwater Program Coordinator, or designee, is required to perform a compliance inspection of all SWPPP projects. A **Compliance Inspection Form** is provided in **Appendix J**.

5.2.5 Construction Site Close-Out Requirements

At the completion of all projects, the NYSCC Project Manager is required to notify NYSCC Environmental Group to initiate project close out. The Contractor will be responsible for completing the SPDES Construction General Permit Notice of Termination (NOT). It is up to the discretion of the NYSCC Environmental Group if a final project site visit and/or as-builts of the project will be required to complete the project close out. A final SWPPP inspection by the Qualified Inspector with supporting photos documenting that the site has achieved full stabilization and all erosion and sediment controls and post-construction stormwater management facilities are complete, will be required to be submitted to the NYSCC Environmental Group in order for close out.

Once the Environmental Group is satisfied with all project close out procedures, the Stormwater Program Coordinator, or their designee, is responsible for signing the NOT and completing notification to NYSDEC.

5.2.6 Enforcement Process

All contractors, including NYSCC staff, are required to follow the applicable regulations, including:

- Project Specifications
- Project Erosion and Sediment Control Plan and Notes
- Project Stormwater Management Plan and Notes, if applicable
- Project specific Stormwater Pollutant Prevention Plan (SWPPP), if applicable
- New York State Standard Specifications for Sediment and Erosion Control
- New York State Stormwater Design Manual, if applicable
- NYSDEC SPDES General Permit for Construction Activity, if applicable
- NYSDEC and/or USACE Permit requirements, if applicable

Additionally, all Third Party Contractors are also required to conform to the regulations and guidance included in:

- NYSCC Occupancy and Work Permit Accommodation Guidelines (TAP-922)
- NYCC General Design and Construction Requirements (TAP-923A)
- NYSCC Design and Construction Requirements for Residential/Non-Commercial Docks, Decks, Platforms and Boat Launches/Ramps (TAP-923B)
- NYSCC Design and Construction Requirements for Non-Commercial Access to Canal Waters & Non-Commercial use of Corporation Property (TAP-923C)
- NYSCC Design and Construction Requirements for Reduced Speed Buoys (TAP-923D) (Third Party)
- Insurance Requirements as identified by NYSCC Real Property

Violations of these requirements are subject to enforcement actions by NYSCC. Refer to the **NYSCC Enforcement Action Plan** (**Appendix B**) for further details.

5.3 Construction Site Inventory & Inspection Tracking

The Stormwater Program Coordinator is responsible for maintaining a list of all construction sites requiring a SWPPP on the **MS4 Tracking Sheet** and/or NYSCC GIS system, included in this SWMP by reference. The inventory is to be updated as reasonably as feasible to maintain accurate records; however, at minimum, the inventory must be updated annually if construction projects are approved or completed. The annual update will be included in this document as **Appendix K**. The inventory shall include, at a minimum:

- Location of construction site
- Owner/Operator contact information (if other than NYSCC)
- Receiving waterbody name and class
- Receiving waterbody WI/PWL Segment ID
- Prioritization
- Construction project SPDES identification number
- SWPPP approval date
- Inspection history, including dates and ratings (satisfactory, marginal, or unsatisfactory, when available), and
- Current status of the construction site/project (i.e., active, temporarily shut down, complete)

Within thirty (30) days of a construction site becoming active, NYSCC must prioritize the site. Prioritization shall be as follows:

- High Priority
    - Sites with direct conveyance (e.g., channel, ditch, storm sewer) to a surface water of the State that is:
        - Listed in Appendix C of the MS4 General Permit with silt/sediment, phosphorus, or nitrogen as the pollutant of concern (refer to NYSDEC Stormwater Interactive Map for reference)
        - Classified as AA-S, AA, or A (refer to NYSDEC Stormwater Interactive Mapper reference above)
        - Classified with a trout (T) or trout spawning (TS) designation (refer to NYSDEC Stormwater Interactive Mapper reference above)
    - Greater than five (5) acres of disturbed earth at any one time (also requires two SWPPP inspections every 7 days)
    - Earth disturbance within one hundred (100) feet of any lake or pond
    - Earth disturbance within fifty (50) feet of any rivers or streams.
- Low Priority
    - All other sites.

The prioritization of all sites must be reviewed at least annually.

5.4 Training

Training is required as part of the overall Construction Oversight Program. Training shall include four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil & Water Conservation District or other NYSDEC endorsed entity. This training must be completed prior to conducting SWPPP reviews or

construction site inspections, and **every three (3) years** thereafter. Individuals who meet the criteria of a Qualified Individual are not subject to the training requirements.

The Stormwater Program Coordinator is responsible for keeping track of the names, titles, and contact information for individuals who have received training. This information is included in the **MS4 Tracking Sheet**, included by reference.

5.5 Update Log

Table 5-1: SWMP Annual Review Measures

Items to Review		2024	2025	2026	2027	2028
MCM 4	Document individuals who have received construction oversight training.	☐	☐	☐	☐	☐
	Review and update construction oversight procedures.	☐	☐	☐	☐	☐
	Review and update the Construction Site Inventory and Prioritization in **Appendix K**.	☐	☐	☐	☐	☐
	Document individuals who have received erosion and sediment control trainings.	☐	☐	☐	☐	☐
	Document SWPPP reviews conducted.	☐	☐	☐	☐	☐
	Document Pre-Construction Meetings conducted.	☐	☐	☐	☐	☐
	Update Construction Site Inspection Report Forms completed.	☐	☐	☐	☐	☐
	Document final construction site inspections completed.	☐	☐	☐	☐	☐

6 MCM 5 – Post-Construction Stormwater Management

6.1 SWPPP Review

All project subject to the requirements of Section 5.2.1 may also be subject to review for stormwater management components, if applicable. The Stormwater Program Coordinator, or designee, is responsible for the SWPPP review for conformance with post-construction stormwater management regulations.

6.2 Inventory Tracking

NYSCC is required to maintain an inventory of post-construction stormwater practices installed after March 10, 2003. This inventory is required to be updated annually. A summary of the current inventory is provided in Table 6-1. A complete listing of all required information is included in the **MS4 Tracking Sheet**, included in this SWMP by reference.

Table 6-1: Post-Construction Stormwater Practice Inventory

Permanent Feature Identification	Region	Section	Location	Asset Numbers	Type
Stormwater Control Bioretention Area Feigle Road Trail Head	Western	Lockport	Feigle Road Trail Head Parking Lot North Side	12645 (Production) 12646 (Development)	Bioretention
Stormwater Control Wet Swale Lock E-21	Eastern	Utica	Lock E-21 South Side of Parking Lot along Lock Road	12645 (Production) 12646 (Development)	Wet Swale
Stormwater Control Dry Swale and Bioretention Basin Lock E-7	Eastern	Waterford	Lock E-7 west side of lock adjacent to new crane pad/access driveway and between main lock access roadway and the upper lock access roadway	Requested 10/13/22	Dry Swale
Stormwater Control Dry Swale C-9 Access Road	Eastern	Fort Edward	Lock C-9 adjacent to access road	12693 (Production) 12647 (Development)	Dry Swale

6.3 Inspection & Maintenance Program

All post-construction stormwater management facilities located within the NYSCC MS4 area are under the maintenance jurisdiction of NYSCC. As such, NYSCC is responsible for the inspection and maintenance of all of the post-construction facilities on the inventory list as identified in the **MS4 Tracking Sheet**.

The Stormwater Program Coordinator is responsible for coordinating all inspections and follow-up maintenance, as necessary. Inspection dates and key results are to be included in the **MS4 Tracking Sheet**, included in this SWMP by reference. All follow-up actions (i.e, maintenance, repair, or higher level inspection) must be initiated within **thirty (30) days** of an inspection.

Table 6-2: Maintenance/Inspection Details

Inspection Type	Level 1	Level 2	Level 3
Frequency	Annually	Once every 5 years, or As a Kick-Out from a Level 1 Inspection	As a Kick-Out from a Level 2 Inspection
Inspector	NYSCC Staff Trained in Stormwater O&M	Stormwater Program Coordinator or Designee Trained in Level 2 Inspection	Professional Engineer or Landscape Architect with Stormwater Design Experience
Inspection Forms/Guidance	Level 1 Check Lists, see **Appendix L**	Level 2 Check Lists, see **Appendix L**	Will vary by condition. Refer to NYSDEC Stormwater Management Practices Maintenance Guidance for further information.
Typical Maintenance Activities	• Routine mowing • Trash removal • Plant care and upkeep • Mulching as needed • Removal of small amounts of sediment from pretreatment areas	• Removal of larger amounts of sediment • Structural damage repair • Minor regrading and scarification of soil surface to restore permeability	• Redesign an improperly functioning practice • Complete regrading of practice and/or contributing drainage area • Replacing soil media and plantings (new planting plan) • Modification of drainage structures

6.4 Training

The following training is required to participate in the post-construction stormwater management inspection and maintenance program.

- All new and existing staff who are to conduct Level 1 or Level 2 inspections must be trained prior to conducting inspections. Training must be renewed **once every five (5) years**.

The Stormwater Program Coordinator is responsible for keeping track of the names, titles, and contact information for individuals who have received training. This information is included in the **MS4 Tracking Sheet**, included by reference.

6.5 Update Log

Table 6-3: SWMP Annual Review Measures

Items to Review		2024	2025	2026	2027	2028
MCM 5	Review and update inventory of post-construction SMPs	☒	☐	☐	☐	☐
	Document individuals who have received post-construction SMP inspection and maintenance training.	☐	☐	☐	☐	☐
	Review and update the post-construction SMP inspection and maintenance procedures.	☒	☐	☐	☐	☐

7 MCM 6 – Pollution Prevention and Good Housekeeping

NYSCC is required to incorporate best management practices (BMPs) for both the Municipal Facilities Program and the Municipal Operations Program to minimize the discharge of pollutants associated with these programs. As a part of both programs, BMPs must include:

- Minimizing exposure of pollutants to rain, snow, snowmelt, and runoff.
- Follow a preventative maintenance program for routine inspection, testing, maintenance, and repair of fueling areas, vehicles, and equipment.
- Minimizing the potential for leaks, spills and other releases that may be exposed to stormwater.
- Implementing erosion and sediment control measures.
- Managing vegetated areas and open space to reduce pollutants from pet waste, herbicides, pesticides, etc.
- Enclosing or covering salt pile storage.
- Managing waste, garbage, and floatable debris.

NYSCC documents these BMPs in a series of Standard Operating Procedures (SOPs) for all Canal Maintenance activities. These SOPs are provided on the **Governance Homepage of the Canals Intranet** for general access to NYSCC staff. The SOPs are constantly evolving and expanding. All staff should refer to the most current documents in the repository for reference. The following SOPs document the BMPs recommended for the Municipal Facilities and Operations Programs.

- Earthen Embankment Integrity Program, Best Management Practices
- MD 2008-4: Operation, Maintenance, and Inspection of Oil Water Separators at Maintenance Facilities
- CD 2007-5: Snow Disposal and Deicer Storage Practices
- CD 2009-5: Universal Waste Disposal
- CD 2007-6: Hazardous Waste Generated by Maintenance Activities
- MD 2008-3: Care and Cleaning of Maintenance Vehicles and Motorized Equipment
- MD 2000-9: Spoil Area Guidelines
- MD 2008-6: Petroleum Spill Response Guidance
- CD 2009-6: Preventing Water Pollution
- Maintenance Facility Good Housekeeping

7.1 Municipal Facilities Program

7.1.1 Inventory and Prioritization

NYSCC maintains an inventory of all of its municipal facilities in the **MS4 Tracking Sheet**, included in this SWMP by reference. Each of the facilities has been prioritized based on the activities at each site, in accordance with the requirements of the MS4 General Permit. Table 7-1 and Table 7-2 document the NYSCC facilities and their current prioritization.

Table 7-1: High Priority Facilities

Facility Name	Region	Receiving Waterbody
Fort Edward Maintenance Facility	Eastern	Champlain Canal
		Upper Hudson, Main Stem

Table 7-1: High Priority Facilities

Facility Name	Region	Receiving Waterbody
Waterford Maintenance Facility	Eastern	NY Barge Canal (Portion 8)
Fonda Maintenance Facility	Eastern	Mohawk River/NYS Barge Canal, Main Stem
Lysander Maintenance Facility	Western	Oswego River, Upper, Main Stem
		Minor Tribs to Oswego River
Lyons Maintenance Facility	Western	NYS Barge Canal (portion 2b)
Pittsford Maintenance Facility	Western	NYS Barge Canal (Portion 4)
Hulberton Shop	Western	NYS Barge Canal (portion 2b)
Lockport Maintenance Facility	Western	NYS Barge Canal (portion 2a)
Albion Maintenance Facility	Western	NYS Barge Canal (portion 5)

Table 7-2: Low Priority Facilities

Facility Name	Region	Receiving Waterbody
Lock C12	Eastern	Mettawee River, Lower, and minor tribs
Lock C11	Eastern	Wood Cr/Champlain Canal and minor tribs
Lock C9	Eastern	Wood Cr/Champlain Canal and minor tribs
Lock C8	Eastern	Champlain Canal
Lock C7	Eastern	Minor Tribs to Upper Hudson
Lock C6	Eastern	Minor Tribs to Upper Hudson
Lock C5	Eastern	Upper Hudson, Main Stem
Lock C4	Eastern	Upper Hudson, Main Stem
Lock C3	Eastern	Upper Hudson, Main Stem
Lock C2	Eastern	Upper Hudson, Main Stem
Lock C1	Eastern	Upper Hudson, Main Stem
Lock E7	Eastern	Mohawk River/NYS Barge Canal, Main Stem
Lock E6	Eastern	NY Barge Canal (Portion 8)
Lock E5	Eastern	NY Barge Canal (Portion 8)
Lock E4	Eastern	NY Barge Canal (Portion 8)
Lock E4	Eastern	Minor Tribs to Mohawk River
Lock E3	Eastern	NY Barge Canal (Portion 8)
Lock E2	Eastern	NY Barge Canal (Portion 8)
Lock E9	Eastern	Mohawk River/NYS Barge Canal, Main Stem
Lock E8	Eastern	Mohawk River/NYS Barge Canal, Main Stem
Lock E20	Eastern	NY Barge Canal (Portion 7)
Lock E24	Western	Seneca River, Lower, Main Stem
Lock O1 & 3 Lift Bridges	Western	Oswego River, Upper, Main Stem
Lock O1 & 3 Lift Bridges	Western	Minor Tribs to Oswego River
Syracuse Canal and Maintenance Terminal	Western	Onondaga Creek, Lower, and Tribs

Table 7-2: Low Priority Facilities

Facility Name	Region	Receiving Waterbody
Court Street Dam	Western	Genesee River, Lower, Main Stem
Brockport Main Lift Bridge	Western	NYS Barge Canal (Portion 2C)
Brockport Park Ave Lift Bridge	Western	NYS Barge Canal (Portion 2C)
Adams Basin Lift Bridge	Western	NYS Barge Canal (Portion 2C)
Adams Basin Lift Bridge	Western	Salmon Creek and Minor Tribs
Spencerport Union Lift Bridge	Western	NYS Barge Canal (Portion 2C)
Fairport Lift Bridge	Western	NYS Barge Canal (Portion 4)
Lock E33	Western	NYS Barge Canal (Portion 4)
Lock E32	Western	NYS Barge Canal (Portion 4)
Lock E32	Western	Allen Creek and Tribs

7.1.2 High Priority Facility Requirements

7.1.2.1 Stormwater Pollution Prevention Plans

As part of the requirements of the MS4 General Permit, within 5 years of the effective date of the permit, all high priority facilities must have a site specific Stormwater Pollution Prevention Plan (SWPPP) prepared. Each of these SWPPPs are included in the SWMP by reference. The SWPPPs, as developed, are available for all municipal facility employees for reference.

Table 7-3 documents the status of the SWPPPS for each high priority facility.

NYSCC has not completed all the site specific SWPPPs for the High Priority facilities. All of the SWPPPs must be complete by January 3, 2029.

7.1.2.2 Wet Weather Visual Monitoring

Once every five (5) years, NYSCC must conduct wet weather visual monitoring of the monitoring locations (identified in Section 4.2 and recorded in the **MS4 Tracking Sheet**), as well as any additional areas where stormwater many be leaving the site from fueling areas, storage areas, vehicle and equipment maintenance/fueling areas, material handling areas, or other similar pollutant generating areas.

All samples must be collected from a storm event with at least 0.1-inch of precipitation, providing the interval from the preceding measurable storm is at least 72 hours, and documented using the **Storm Event Data Form** (**Appendix M**). The data from and results of the monitoring must be included in the site specific SWPPP, included in this SWMP by reference. The sample must be visually analyzed for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and any other obvious indicators of stormwater pollution. The results of the visual examination should be documented using the **Visual Monitoring Form** (**Appendix M)** and kept with the site specific SWPPP, included in this SWMP by reference.

Table 7-3 documents the status of the Wet Weather Visual Monitoring requirements for each high priority facility.

Corrective Measures

If the visual examinations indicate the presence of color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution, the Stormwater Program Coordinator must coordinate corrective measures. Corrective measures may include:

1. Evaluation of the facility and potential sources for the identifies pollutants.
2. Once the source of the pollutant is identified, implement BMPs to remedy the problem.
3. Revise the site specific SWPPP, if necessary, to document the required BMPs.
4. Perform an additional visual inspection during the first 0.1-inch of precipitation following the implementation of the corrective measures.

All supporting documentation regarding the corrective measures at the site should be included in the SWPPP for future reference.

7.1.2.3 Comprehensive Site Assessments

Once every five (5) years, NYSCC must complete a comprehensive site assessment for each high priority municipal facility utilizing the **Municipal Facility Assessment Form** (**Appendix N**). The Site Assessment must document how the site is in compliance with the site specific SWPPP, the requirements of this SWMP, and the general requirements of the MS4 General Permit.

Table 7-3 documents the status of the required Comprehensive Site Assessments for the high priority facilities.

Corrective Measures

For any deficiencies identified during the Comprehensive Site Assessment, the Stormwater Program Coordinator must direct corrective measures to minimize any discharge in violation of the permit:

- **Within 24-hours**, if the violation has a reasonable likelihood of adversely affecting human health or the environment.
- **Within seven (7) days**, if the violation does not have a reasonable likelihood of adversely affecting human health of the environment.

All corrective measures and specific interim milestones to be implemented to achieve the corrective measures must be documented in the site specific SWPPP and included in this SWMP by reference.

Table 7-3: High Priority Facilities Assessment Status

Facility Name	SWPPP Completion Date	Wet Weather Assessment Date	Comprehensive Site Assessment Date
Fort Edward Maintenance Facility			
Waterford Maintenance Facility			
Fonda Maintenance Facility			
Lysander Maintenance Facility			
Lyons Maintenance Facility			

Table 7-3: High Priority Facilities Assessment Status

Facility Name	SWPPP Completion Date	Wet Weather Assessment Date	Comprehensive Site Assessment Date
Pittsford Maintenance Facility			
Hulberton Shop			
Lockport Maintenance Facility			
Albion Maintenance Facility			

7.1.3 Low Priority Facility Requirements

7.1.3.1 Comprehensive Site Assessments

Once every five (5) years, NYSCC must conduct a complete comprehensive site assessment for each low priority municipal facility using the **Municipal Facility Assessment Form** (Appendix N). The Site Assessment must document how the site is in compliance with the requirements of this SWMP, and the general requirements of the MS4 General Permit.

Table 7-4 documents the status of the required Comprehensive Site Assessments for the low priority facilities.

Table 7-4: Low Priority Facility Comprehensive Site Assessment Tracking

Facility Name	Date Comprehensive Site Assessment Completed
Lock C12	
Lock C11	
Lock C9	
Lock C8	
Lock C7	
Lock C6	
Lock C5	
Lock C4	
Lock C3	
Lock C2	
Lock C1	
Lock E7	
Lock E6	
Lock E5	
Lock E4	
Lock E4	
Lock E3	
Lock E2	
Lock E9	
Lock E8	

Table 7-4: Low Priority Facility Comprehensive Site Assessment Tracking

Facility Name	Date Comprehensive Site Assessment Completed
Lock E20	
Lock E24	
Lock O1 & 3 Lift Bridges	
Lock O1 & 3 Lift Bridges	
Syracuse Canal and Maintenance Terminal	
Court Street Dam	
Brockport Main Lift Bridge	
Brockport Park Ave Lift Bridge	
Adams Basin Lift Bridge	
Adams Basin Lift Bridge	
Spencerport Union Lift Bridge	
Fairport Lift Bridge	
Lock E33	
Lock E32	
Lock E32	

Corrective Measures

For any deficiencies identified during the Comprehensive Site Assessment, the Stormwater Program Coordinator must direct corrective measures to minimize any discharge in violation of the permit:

- **Within 24-hours**, if the violation has a reasonable likelihood of adversely affecting human health or the environment.
- **Within seven (7) days**, if the violation does not have a reasonable likelihood of adversely affecting human health of the environment.

All corrective measures and specific interim milestones to be implemented to achieve the corrective measures must be documented in this SWMP. Documentation may be kept with the site specific records and documented in the **MS4 Tracking Sheet**, all included in this SWMP by reference.

7.2 Municipal Operations Program

NYSCC has a limited municipal maintenance program. NYSCC does not own or operate public streets. The NYSCC public facilities are generally limited to open space, trails, waterways, and locks.

7.2.1 BMPs

NYSCC maintenance and operations is governed by Standard Operation Procedures (SOPs). These SOPs are currently under revision. The SOPs are generally available for access by all NYSCC employees on the **Governance Homepage of the Canals Intranet,** included in this SWMP by reference. All SOPs are constantly evolving and expanding. All employees should refer to the repository for the most current versions and procedures. These SOPs include information such as:

- Winter road maintenance
- Open space maintenance (pesticides, fertilizers, pet waste, tec.)
- Solid waste management
- Marine operations

7.2.2 Corrective Actions

For any deficiencies identified during the general operations on NYSCC lands, the Stormwater Program Coordinator must direct corrective measures to minimize any discharge in violation of the permit:

- **Within 24-hours**, if the violation has a reasonable likelihood of adversely affecting human health or the environment.
- **Within seven (7) days**, if the violation does not have a reasonable likelihood of adversely affecting human health of the environment.
- For corrective actions that require special funding or construction that will take **longer than thirty (30) days** to complete, a schedule must be prepared that specifies interim milestones that will ensure compliance in the shortest reasonable time.

7.2.3 Catch Basin Inspection and Maintenance

NYSCC has not completed the inventory of all catch basins within the MS4. This section of the SWMP will be completed once the inventory is complete and a maintenance plan is developed. The inventory and plan must be complete by January 3, 2027.

7.2.4 Roads, Bridges, Parking Lots, and ROW Maintenance

7.2.4.1 Sweeping

NYSCC does not own or operate public streets. Street sweeping is not part of the MS4 program.

7.2.4.2 Maintenance

NYSCC does not own or operate public streets; therefore, a maintenance plan of streets is not required. Maintenance of the bridges crossing the Canal are under the jurisdiction of NYSDOT.

7.2.4.3 Winter Road Maintenance

NYSCC requires hand spreading of de-icing materials in and around the Canals property, as NYSCC maintains small areas of roadway.

NYSCC does allow outside municipalities to dispose of snow within the Canal, if the municipality obtains the necessary work permit and the snow meets the environmental requirements, as established by NYSDEC. Coordination with NYSCC Environmental Group is required for permission.

7.3 Training

Training shall be provided facility operation and management individuals in regards to both the Municipal Facility

7.4 Update Log

Table 7-5: SWMP Annual Review Measures

Items to Review		2024	2025	2026	2027	2028
MCM 6	Review and update the inventory of municipal facilities.	☒	☐	☐	☐	☐
	Document individuals who have received municipal facility procedures training.	☐	☐	☐	☐	☐
	Review and update the municipal facility procedures and BMPs.	☒	☐	☐	☐	☐
	Document individuals who have received municipal operations program procedures training.	☐	☐	☐	☐	☐
	Review and update the municipal operations program procedures.	☒	☐	☐	☐	☐
	All roads in business and commercial areas must be swept (*Not Applicable*).	☐	☐	☐	☐	☐

Appendix A: Notice of Intent

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

3/1/2024

Re: Acknowledgement of Notice of Intent for Coverage under SPDES General Permit for Municipal Separate Storm Sewer Systems (GP-0-24-001)

Dear NY State Canal Corporation,

This is to acknowledge that the New York State Department of Environmental Conservation (DEC) received a complete electronic Notice of Intent (eNOI) for the MS4 Operator:

NY State Canal Corporation

Pursuant to 6 NYCRR 750-1.21(d) and Part II of the SPDES MS4 GP, GP-0-24-001, NY State Canal Corporation is authorized to discharge stormwater under the terms and conditions of the SPDES MS4 GP, GP-0-24-001, starting on the effective date of **01/03/2024**. NY State Canal Corporation must comply with all requirements contained in the MS4 GP, GP-0-24-001.

The following SPDES ID No. should be included in all correspondences with the DEC:

SPDES ID No: NYR20A025

Should you have any questions regarding any aspect of the requirements in the MS4 GP, GP-0-24-001, please contact MS4GP@dec.ny.gov or (518) 402-8111.

.

Sincerely,

Meredith Streeter

Meredith Streeter, P.E.
Chief, Central Section
Bureau of Water Permit

Table of Contents

MS4 Notice of Intent

version 1.0

(Submission #: HQ1-0W4M-KKVRS, version 1)

Details

Submitted	2/16/2024 (25 days ago) by Aaron Gorges
Alternate Identifier	NYR20A025
Submission ID	HQ1-0W4M-KKVRS
Status	Deemed Complete

Form Input

MS4 Operator Information

Is this NOI for an MS4 Operator continuing coverage?
Yes

Permit ID #:
NYR20A025

MS4 Operator Type
Non-traditional

Non-Traditional
State

Traditional Non-Land Use or Non-Traditional

Traditional non-land use and non-traditional MS4 Operator requirements are found in Part VII of the MS4 General Permit.

Municipality Name or Legal Entity Name
NY State Canal Corporation

Legal Municipal/Entity Mailing address

30 South Pearl Street
Suite 400
Albany, NY 12207
Albany

Ranking Official

Official Title	First and Last Name	Phone	Email
Other: Director of Environmental Health and Safety	James Candiloro	5184336841	james.candiloro@nypa.gov

NOI Preparer

NOI Preparer Title	First and Last Name	Phone	Email
Other: Environmental Engineer II	Aaron Gorges	5183129497	aaron.gorges@nypa.gov

NAICS Codes

Federal, State or Local Government - 924110
Military Bases - 928110
Highway, road or other thoroughfare system - 237310

Large Hospitals - 622110
Public Colleges and Universities - 611310
Correctional Institutions - 922140
NAICS Code Lookup

NAICS Code
924110

Is the MS4 Operator working with other MS4 Operators to implement the Stormwater Management Program?
No

Does the MS4 Operator have any facilities that need to obtain MSGP coverage under MSGP permit?
No

MS4 Location Information

Does the MS4 Operator have multiple locations across the state?
Yes

Enter the facility name, street address, city and zip for each facility across the state where the MS4 Operator is implementing the MS4 Permit.

MS4 Facilities

Facility Name	Street Address	Facility City	Facility Zip
Lock E33	1205 Edgewood Ave, Rochester, NY 14618	Rochester	14618
Adams Basin Lift Bridge	Washington Street	Spencerport	14559
Brockport Main Lift Bridge	Main Street	Brockport	14420
Fairport Lift Bridge	Main Street	Fairport	14450
Spencerport Union Lift Bridge	Union Street	Spencerport	14559
Court Street Dam	Court Street	Rochester	14604
Lock E8	115 Rice Rd, Rotterdam, NY 12306	Rotterdam	12306
Lock E9	9 State Canal Park Rd (Rte 103)	Rotterdam Junction	12150
Lock C7	2579 State Route 4	Fort Edward	12828
Lock C1	15 Lock One Rd	Waterford	12188
Lock E20	9028 River Rd	Marcy	13403
Lock O1 and 3 Lift Bridges	87 State St	Phoenix	13135
Lock E24	8 Syracuse St	Baldwinsville	13027
Syracuse Canal and Maintenance Terminal	425 Solar St	Syracuse	13204
Utica Canal and Maintenance Facility	105 North Genessee St	Utica	13502
Lysander Maintenance Facility	9052 River Rd.	Phoenix	13135
Waterford Maintenance Facility	200 Davis Avenue	Waterford	12188
Fort Edwards Maintenance Facility	17 Broadway	Foret Edward	12828
Pittsford Maintenance Facility	3837 Monroe Avenue	Pittsford	14534
Lock E32	2785 Clover St	Pittsford	14534
Lock E2	NYS Route 32 Short 5th St	Waterford	12188
Lock E3	48 Washington Ave	Waterford	12188
Lock E4	25 Flight Lock Rd	Waterford	12188
Lock E5	55 Flight Lock Rd	Waterford	12188
Lock E6	77 Flight Lock Rd	Waterford	12188
Lock E7	1280 Lock 7 Rd	Niskayuna	12309

Facility Name	Street Address	Facility City	Facility Zip
Lock E8	115 Rice Rd, Rotterdam	Rotterdam	12306
Hulberton Shop	3428 Market St	Holley	14470
Lockport Maintenance Facility	2 Mill Street	Lockport	14094
Albion Maintenance Facility	141 North Liberty Street	Albion	14411
Lyons Maintenance Facility	7665 Dry Dock Road	Lyons	14489
Fonda Maintenance Facility	2 South Bridge Street	Fonda	12068

Waterbody Information (1 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 7) - 1201-0064

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (2 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Mohawk River/NYS Barge Canal, Main Stem - 1201-0006

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (3 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Mohawk River/NYS Barge Canal, Main Stem - 1201-0073

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (4 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Mohawk River, Lower, Main Stem - 1201-0085

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (5 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Upper Hudson, Main Stem - 1101-0002

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (6 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Upper Hudson, Main Stem - 1101-0043

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (7 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Champlain Canal - 1101-0086

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (8 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Oneida Lake - 0703-0001

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (9 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Oneida River, Main Stem - 0703-0020

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (10 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Oswego River, Upper, Main Stem - 0701-0021

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (11 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Seneca River, Lower, Main Stem - 0701-0001

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (12 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Seneca River, Lower, Main Stem - 0701-0008

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (13 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Irondequoit Cr, Lower, and minor tribs - 0302-0024

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (14 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Genesee River, Lower, Main Stem - 0401-0001

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (15 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 5) - 0704-0020

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (16 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 1) - 0102-0044

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (17 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Tonawanda Creek, Lower, Main Stem - 0102-0022

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (18 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 2c) - 0301-0008

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (19 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Genesee River, Middle, Main Stem - 0401-0003

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (20 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 4) - 0302-0074

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (21 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Onondaga Lake Outlet - 0702-0020

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (22 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
NYS Barge Canal (portion 8) - 1201-0086

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (23 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Minor Tribs to Mohawk River - 1201-0095

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (24 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Upper Hudson, Main Stem - 1101-0042

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

Waterbody Information (25 of 25)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.
Stormwater Interactive Map

Waterbody name and segment receiving MS4 Operator discharges
Upper Hudson, Main Stem - 1101-0044

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?
No

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?
No

CERTIFICATION

The MS4 Operator has read and understands the SPDES MS4 General Permit, GP-0-24-001, as it pertains to permit requirements as well as the timeframes for compliance set forth in the permit.
Yes

I am the ranking elected official or Principal Executive Officer for the MS4 Operator and will be signing the form electronically.
No

Attach completed certification form.
ms4eNOIcertification.pdf - 02/16/2024 09:31 AM
Comment
NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
3/1/2024 12:55 PM	MS4 eNOI Acknowledgement.pdf	Generated Document	Audra Rossignol
2/16/2024 9:31 AM	ms4eNOIcertification.pdf	Attachment	Aaron Gorges

Status History

	User	Processing Status
1/29/2024 10:44:21 AM	Aaron Gorges	Draft
2/16/2024 9:36:49 AM	Aaron Gorges	Submitting

	User	Processing Status
2/16/2024 9:37:02 AM	Aaron Gorges	Submitted
3/1/2024 12:55:33 PM	Audra Rossignol	Deemed Complete

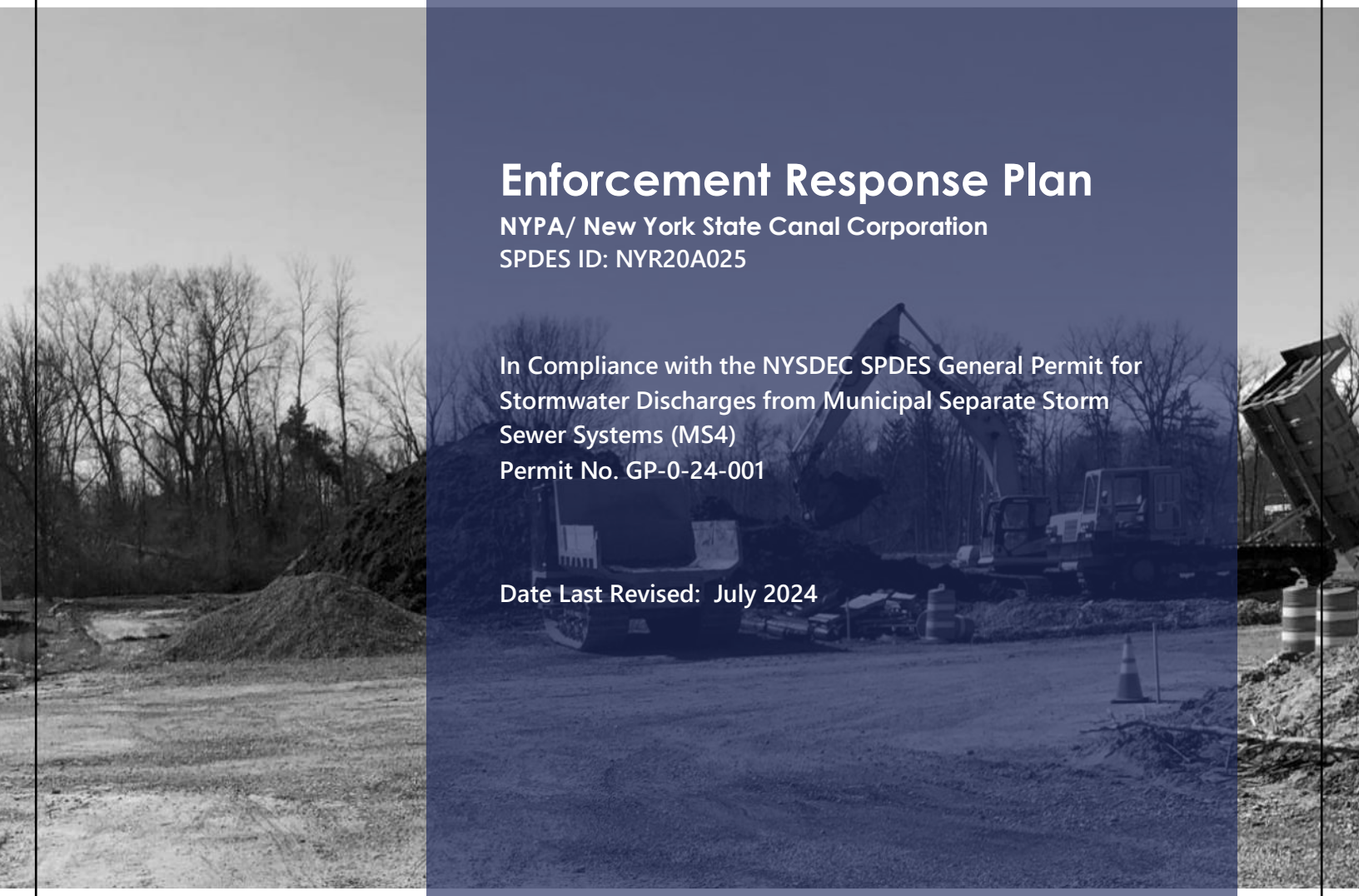
Audit

Event	Event Description	Event By	Event Date
MS4 eNOI Acknowledgement	The MS4 eNOI Acknowledgement document has been generated and is available for download.	Audra Rossignol	3/1/2024 12:55 PM

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Aaron Gorges	2/16/2024 9:37:02 AM

Appendix B: Enforcement Response Plan



Enforcement Response Plan

NYPA/ New York State Canal Corporation
SPDES ID: NYR20A025

In Compliance with the NYSDEC SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4)
Permit No. GP-0-24-001

Date Last Revised: July 2024

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Table of Contents

1 Introduction

This Enforcement Response Plan (ERP) was developed to satisfy Part IV.F.1 of the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-0-24-001 (MS4 General Permit), effective January 3, 2024. Under the MS4 General Permit, the New York State Canal Corporation (NYSCC) is a Non-Traditional MS4 Operator, responsible for the storm water discharges associated with its land and facilities in the regulated MS4 areas across the state (SPDES ID: NYR20A025). NYSCC is responsible for devising and implementing a Storm Water Management Program (SWMP) to reduce the discharge of pollutants from stormwater runoff to the maximum extent practicable. This ERP is a part of the SWMP Plan that documents the enforcement actions and legal authorities that NYSCC utilizes to eliminate and abate pollutant discharges and defines enforcement authority for NYSCC staff, including enforcement tools, escalation process, and schedules for implementation of enforcement actions.

1.1 Legal Authority

Pursuant to § 10 of Canal Law, NYSCC is charged with supervision of the canal system. This responsibility includes, among other things, a requirement to "keep and maintain in good condition the canals, canal terminals and corporation equipment used in the maintenance and repair of the canal system." CAL § 10(8).

Notwithstanding this broad responsibility, NYSCC recognizes certain limits to its legal authority. For example, NYSCC lacks authority to regulate statewide environmental resources, such as regulating air and water quality or protecting threatened and endangered species. Regulatory jurisdiction for those resources lies with other agencies, including the New York State Department of Environmental Conservation (DEC) and local municipalities with delegated enforcement responsibility, the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and the U.S. Department of the Interior. In order to fulfill its general mandate, NYSCC recognizes the need to comply with all applicable regulatory requirements from those agencies and also to assist, where possible, in promoting compliance by reporting known or suspected violations that may affect the canal system and exploring measures to discourage violations.

Based on NYSCC's broad responsibility to supervise the canal system, and the corresponding need to coordinate with other regulatory agencies, NYSCC has identified the following potential mechanisms to assist in the enforcement of the MS4 General Permit:

- Notify and cooperate with NYSDEC to report any known or suspected discharges into the canal system not authorized by the MS4 General Permit
- Notify local municipalities
- Issue verbal warnings and escalate when necessary
- Enforce provisions of NYSCC permits, including revocation when necessary
- Enforce provisions of NYSCC leases, including termination when necessary
- Enforce provisions of NYSCC contracts, including termination when necessary

The legal authority to take the measures above come from various sections of Canal Law and implementing regulations promulgated by the NYSCC, including but not limited to:

- CAL § 10, General power and duties of the corporation relating to canals
- CAL § 22, Supervision of contracts
- CAL § 32, Performance of contracts

- CAL § 56, Conditions and terms of leases
- CAL § 100, Granting revocable permits
- CAL § 132, Investigate matters relating to the canal system
- 21 NYCRR 150.6(b), Prohibited activities

1.2 Reporting

Every NYPA and NYSCC employee, including seasonal workers and canal walkers, help to ensure environmental compliance by promptly reporting suspected environmental violations to the NYSCC Environmental Group (EG). Employee's reporting of actual or potential discharges in good faith are covered by NYPA and NYSCC's Antiretaliation Policy.

The EG is responsible for reporting the violation to the appropriate regulatory agency and direct response actions. Individuals within EG responsible for storm water discharges, illicit discharges, spills, and other release of pollutants reporting include the NYSCC Environmental Scientists and Environmental Engineers.

NYSCC Employees can also inform NYSCC Project Managers (PM), Construction Maintenance Supervisors (CMS), Transportation Maintenance Engineers (TME), Construction Managers (CM) and Construction Inspectors (CI) of potential violations of erosion and sediment control regulations, authorizations, permits, or permit conditions, who will then report to the EG for reporting and action.

For work being performed by NYSCC staff, every NYSCC employee is empowered to stop work for potential or suspected environmental violations. For work being performed by vendors, the Director of Environmental Health and Safety has stop work authority.

The EG will work with NYSCC groups to promote public awareness of its ability to report potential illicit discharges to NYSCC.

2 Actions in Response to Illicit Discharges

The MS4 General Permit requires that NYSCC take measures to detect and eliminate illicit discharges, spills or other release of pollutants, and unpermitted connections to its MS4. An illicit discharge is defined as any discharge to an MS4 that is not composed of stormwater, except those identified in Part I.A.3 of the MS4 General Permit. Examples of illicit discharges are non-permitted sanitary sewage, garage drain effluent, and waste motor oil. However, an illicit discharge could be any other non-permitted discharge which NYSCC or NYSDEC has determined to be a substantial contributor of pollutants to the MS4. Illicit discharges can occur throughout the MS4, including as part of post-construction stormwater management practices.

NYSCC's SWMP Plan outlines procedures for detection of illicit discharges and the methods for tracking down the sources of the illicit discharges. Refer to the SWMP Plan for further discussion on detection. Once identified, the following outlines the enforcement procedures to rectify the violation. EG will develop and maintain internal governance documents to ensure implementation of the information outlined in this section's tables and figure.

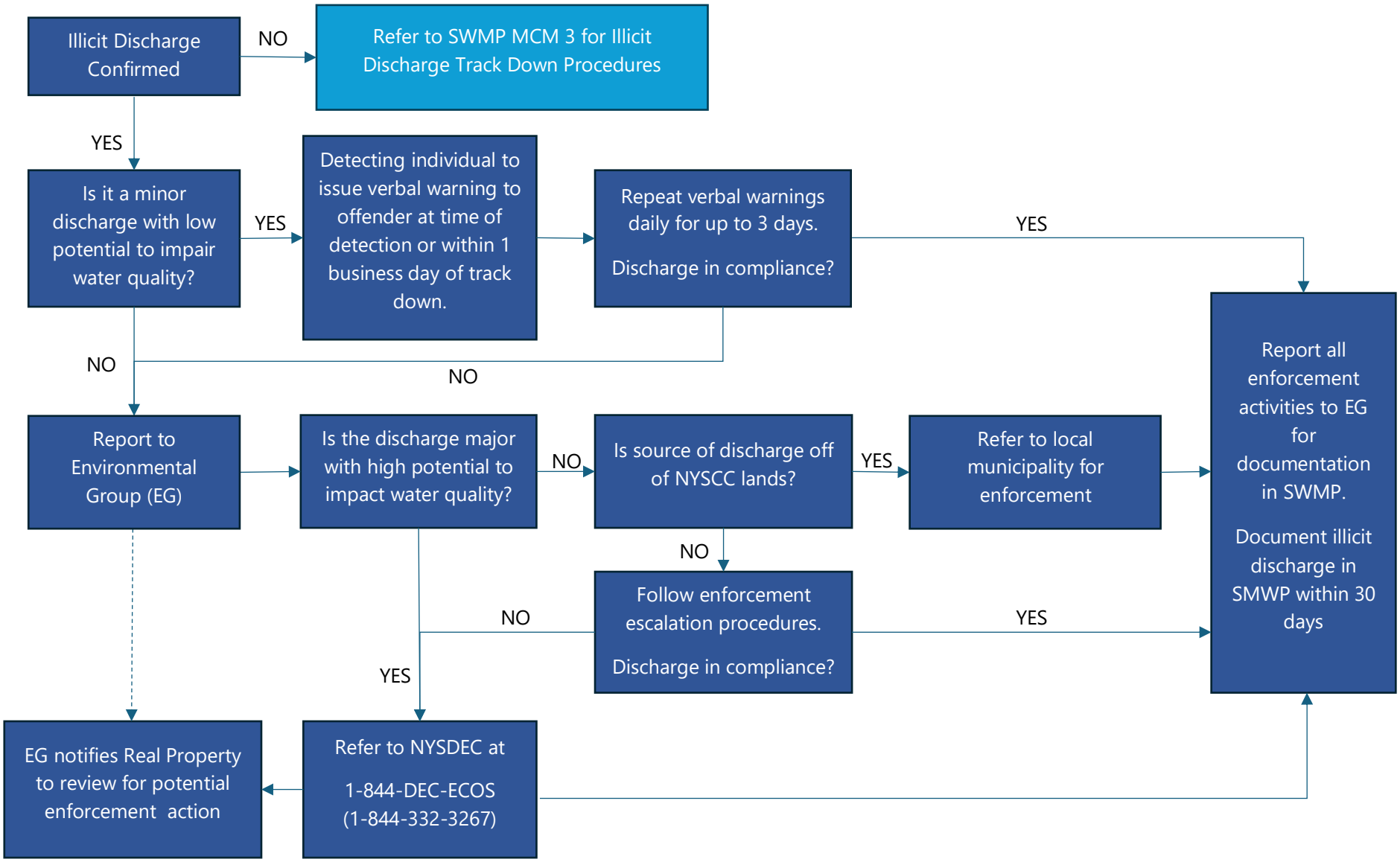
Table 2-1: Timing for Reportable Illicit Discharges Following Detection

Illicit Discharge Detection	EG Response Time (following detection)
Discharges containing petroleum	Within 2 hrs, report to NYS Spill Hotline 1-800-457-7362
Discharges of sanitary wastewater that would affect bathing areas during bathing season, shell fishing areas, or public water intakes	Within 2 hrs, report to the appropriate DEC Regional Water Engineer and local health department
Obvious illicit discharge detected	Within 24 hrs, initiate track down procedures specified in the SWMP Plan. Refer to SWMP MCM 3.
Suspect illicit discharge detected	Within 5 days, initiate track down procedures specified in the SWMP Plan. Refer to SWMP MCM 3.

Table 2-2: Illicit Discharge Enforcement Actions

Action	Responsible Staff	Applicability	Schedule
Verbal Warning	All	Applies to minor violations from any source with low potential to impact water quality.	To occur at time of detection (if feasible) or within 3 days of detection.
Refer to Municipality to Apply its ERP	Environmental Group	Applies to violations from off-site source who aren't responsive to verbal warning.	To occur following 3 repeated attempts at verbal warnings or no response within 5 days of initial detection.
		Applies to violations of a serious nature with high potential to impact water quality with sources outside NYSCC jurisdiction.	To occur at time of detection (if feasible) or within 24 hours of detection.
		Applies to violations from off-site source where upstream detection could not be identified / was outside of NYSCC jurisdiction.	To occur within 3 days of detection.
Refer to NYSDEC	Environmental Group	Applies to egregious violations from any source with a clear violation of water quality standards.	To occur at time of detection.

Figure 2-1: Illicit Discharge Detection, Classification and Communication Flow Chart



3 Actions for Construction Violations

3.1 NYSCC-Led Construction Projects

The NYSCC, as the landowner and operator, conducts and oversees construction projects undertaken by its staff or on its behalf. Construction projects are subject to the requirements outlined in:

- Project Specifications
- Project Erosion and Sediment Control Plan and Notes
- Project Stormwater Management Plan and Notes, if applicable
- Project specific Stormwater Pollutant Prevention Plan (SWPPP), if applicable
- New York State Standard Specifications for Sediment and Erosion Control
- New York State Stormwater Design Manual, if applicable
- NYSDEC SPDES General Permit for Construction Activity, if applicable
- NYSDEC and/or USACE Permit requirements, if applicable

3.1.1 Enforcement Actions

All work done by NYSCC staff or on behalf of NYSCC staff is conducted under the supervision of a Construction Inspector or Project Manager responsible for oversight of the construction project. The Construction Inspector/Project Manager shall be responsible for taking enforcement actions listed in Table 3-1 or communicating the violation to the listed authority.

Table 3-1: NYSCC Lead Construction Project Enforcement Actions

Type of Enforcement Action	Applicability	Authority
Informal communication with voluntary compliance (i.e., verbal notification/warnings, weekly inspection reports, public complaint, permitting inspection, etc.)	Applies to minor violations with low impact to water quality.	Construction Inspector, Project Manager
Formal communication of non-compliance	Applies to Contractors that do not comply with informal communication, or for repeated offenses of non-compliance.	Construction Inspector, Project Manager
Stop Work Orders	Applies to Contractors that do not comply with formal communication, have high impact to water quality, or for Contractors with repeated offences of non-compliance.	Director of Environmental Health and Safety

Efforts to obtain a voluntary correction of deficiencies through informal enforcement, such as verbal warnings or written notices, **must not exceed sixty days in duration** (from the time of NYSCC's initial determination until a return to compliance).

Table 3-1: NYSCC Lead Construction Project Enforcement Actions

Type of Enforcement Action	Applicability	Authority
Restoration / Clean Up / Damages	Contractors are required to restore and repair any damages to the satisfaction of NYSCC at their own expense. Liabilities and insurance mechanisms are outlined in each contract documents.	Director of Environmental Health and Safety in consultation with NYPA Legal Affairs Business Unit
Contract Termination	Applies to egregious violations with high impact to water quality, or Contractors with repeated offenses of non-compliance.	NYPA Contracting Officer in consultation with NYPA Legal Affairs Business Unit

3.1.2 Stop Work Authority

Table 3-2: Stop Work Authority

Type of Work	Stop Work Authority
Work being performed by NYSCC staff	Every NYSCC employee is empowered to stop work with the potential for water quality impairment.
Work being performed by Vendors	Director of Environmental Health and Safety

3.2 Third Party Construction Projects

All work being done by a third party on Canal lands must obtain Real Property Occupancy and/or Work Permits prior to commencing work.

Occupancy and Work Permits are 30-day revocable instruments that are issued by the NYSCC.

Occupancy Permits are issued to allow the occupation and use of Canal real property irrespective of whether any work-related activity may be occurring on such property. Occupancy permits are issued for an array of temporary approved uses including: access, beautification, water diversion, docking, and many other uses as long as they do not interfere with operation or maintenance of the Canal System and are consistent with the Canal Recreationway Plan and the NYSCC's goals.

Work Permits are issued to allow an improvement or a physical alteration to be made to Canal real property. Work permits may also be issued for short term use that may not warrant an Occupancy Permit, such as an event on Canal property or for contractor pre-bid visits.

For work being performed on NYSCC land without a permit and authorization from NYSCC, Real Property has the authority to fine offenders up to $100 (Canals Regulation 156.2a & b). The offender must then apply for a Work and/or Occupancy Permit and is subject to all the conditions therein.

All work authorized by an Occupancy or Work Permit are subject to the following:

- NYSCC Occupancy and Work Permit Accommodation Guidelines (TAP-922)
- NYCC General Design and Construction Requirements (TAP-923A)
- NYSCC Design and Construction Requirements for Residential/Non-Commercial Docks, Decks, Platforms and Boat Launches/Ramps (TAP-923B)
- NYSCC Design and Construction Requirements for Non-Commercial Access to Canal Waters & Non-Commercial use of Corporation Property (TAP-923C)
- NYSCC Design and Construction Requirements for Reduced Speed Buoys (TAP-923D)
- Insurance Requirements as identified by NYSCC Real Property
- All applicable items under Section 3.1.

3.2.1 Enforcement Actions

Table 3-3: Third Party Construction Project Enforcement Actions

Type of Enforcement Action	Applicability	Responsible Person(s)
Informal communication with voluntary compliance (i.e., verbal notification/warnings, etc.)	Applies to minor violations with low impact to water quality.	All NYSCC Staff
Formal communication of non-compliance	Applies to Contractors that do not comply with informal communication, or for repeated offences of non-compliance.	Environmental Group
Stop Work Orders	Applies to Contractors that do not comply with formal communication, have high impact to water quality, or for Contractors with repeated offences of non-compliance. (TAP 922 IV.G.)	Director of Environmental Health and Safety
Inspection by NYSCC Staff	For any approved work on the Canal System requiring an on-site inspection by NYSCC staff of one-half day or more, an inspection charge of $250 per occurrence may be applied. (TAP 922 IV. B.3.)	Real Property
Fees / Penalties / Fines	As may be authorized by law, regulation, permit or other agreement	Real Property in consultation with NYPA Legal Affairs Business Unit

Table 3-3: Third Party Construction Project Enforcement Actions

Type of Enforcement Action	Applicability	Responsible Person(s)
Restoration / Clean Up / Damages	Permittee is responsible for site restoration to the satisfaction of NYSCC. Upon failure to restore the Permit Area, NYSCC may perform the work at the Permitee's own cost and expense. Permittee is also liable for any legal costs incurred by NYSCC in collecting such reimbursement. (TAP 922 IV. P.)	Real Property
Surety Deposit and/or Performance/Restoration Bonds	NYSCC withholds the right to require Surety Depots and/or Performance/Restoration Bonds that may be withheld until NYSCC determines that all work has been completed to the satisfaction ofjp NYSCC. (TAP-922 V. D)	Real Property
Permit Revocation	Applies to egregious violations with high impact to water quality, or Contractors with repeated offences of non-compliance.	Real Property

Efforts to obtain a voluntary correction of deficiencies through informal enforcement, such as verbal warnings or written notices, **must not exceed sixty days in duration** (from the time of the NYSCC's initial determination until a return to compliance).

4 Actions for Post-Construction BMP Violations

All post-construction best management practice (BMP) facilities constructed on Canal lands are owned and maintained by NYSCC. Refer to the NYSCC Stormwater Management Plan for inspection, operation, and maintenance procedures.

If violations or issues are identified from BMP facilities with outfalls, grading, etc., that are on NYSCC land, in whole or part, but are not owned, maintained or permitted by NYSCC, NYSCC shall coordinate with the local municipality for enforcement.

5 Unclassified Actions

In the event of additional work that may not be directly subjected to either NYSCC reviewing authority, or directly covered under the NYSCC Work and/or Occupancy Permit requirements, NYSCC shall maintain the authority to stop work that is clearly impacting water quality so long as the action is impacting or encroaching onto Canal Lands.

NYSCC shall also coordinate with the adjacent local municipality for additional enforcement through their MS4 Stormwater Program Officer.

5.1.1 Stop Work Authority

Table 5-1: Stop Work Authority

Type of Work	Stop Work Authority
Encroachment Work / Unapproved Canal Lands Usage and/or Off-Site Impairments	NYSCC Real Property and/or Local Municipal MS4 Stormwater Program Officer

6 Reporting Requirements

NYSCC requires that a description of all formal communications regarding non-compliance, their associated, violations, resolutions, and/or enforcement actions be recorded in the SWMP. For the purpose of this documentation, informal verbal communications can be omitted from reporting.

The Stormwater Program Coordinator will be responsible for maintaining and updating the enforcement action log in accordance with Section IV(F)(2) of the General Permit. All illicit discharges must be documented within the reporting log within 30 days of the incident. The log shall be kept on the **MS4 Tracking Sheet**, an electronic file included in the SMWP by reference. A recording of the log will be added to the SWMP Plan annually during the SMWP Plan update.

Appendix C: Enforcement Response Tracking

Non-Compliance Enforcement Tracking

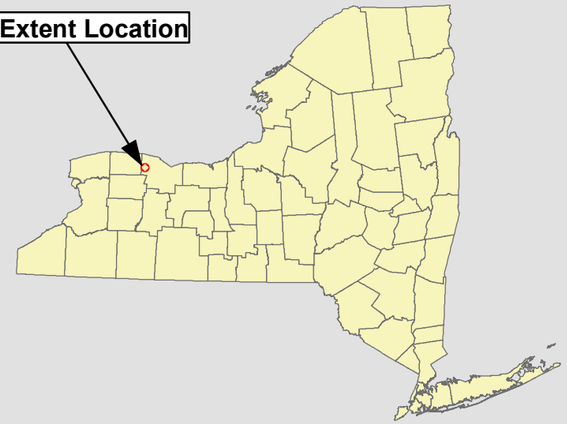
First Name	Last Name	Business Name	Address	Town/City	Zip	Date of Violation	Location of Stormwater Source	Description of Violation	Waterbody Impaired	Schedule for Compliance	Enforcement Actions	Referal To	Date of Compliance/Resolution

Appendix D: Outfall Mapping

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Map Extent Location



146-1

146-2

146-3

147-1

Brockport Main Lift Bridge

Brockport Park Lift Bridge

Receiving Water: Erie Canal
Impairment Status: Not Listed

NOTE: Outfall 146-1 discharges to ditch prior to entry to the Erie Canal

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 100 feet

New York State Canal Corporation

Outfall Mapping - Brockport Lift Bridges

Monroe County | December 2020 | New York

Figure 1

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Adams Basin Lift Bridge

Receiving Water: Erie Canal
Impairment Status: Not Listed

144-1

Map Extent Location

Washington St

Salmon Creek Tributary

Lyell St

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 100 feet

New York State Canal Corporation

Outfall Mapping - Adams Basin Lift Bridge

Monroe County | December 2020 | New York

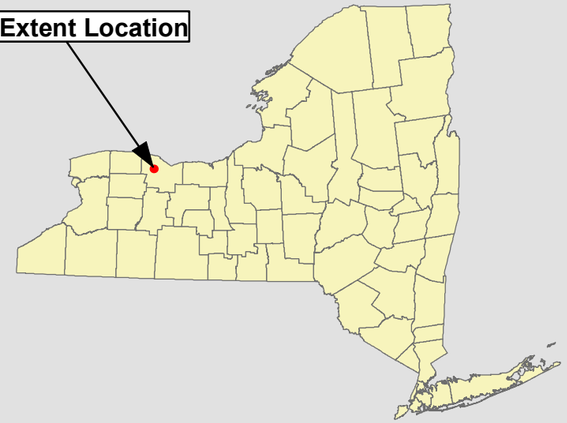
Figure 2

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Map Extent Location



Spencerport Union Lift Bridge

149-2

149-1

Receiving Water: Erie Canal
Impairment Status: Not Listed

Mill St
Mill St
N Union St
Canal St
Canal St
Canal St
Canal St
S Union St
Amity St
Amity St
Amity St
Church St
Church & West
259
259
Northrup Creek
Northrup Creek

bing

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N
W E
S

1 inch = 100 feet

New York State Canal Corporation

Outfall Mapping - Spencerport Union Lift Bridge

Monroe County | December 2020 | New York

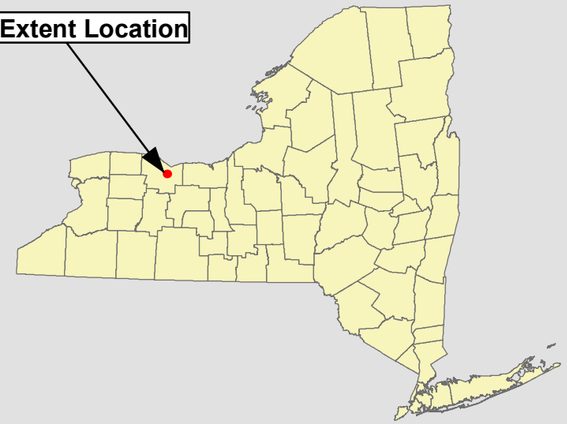
Figure 3

Project No. 1983.001

Legend

- High Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream (Impaired)

Map Extent Location



Court Street Dam

168-1
(Major Outfall)

Receiving Water: Genesee River, Lower, Main Stem
Impairment Status: Impaired
Pollutants of Concern: Pathogens, Phosphorus, & Sediment

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 100 feet

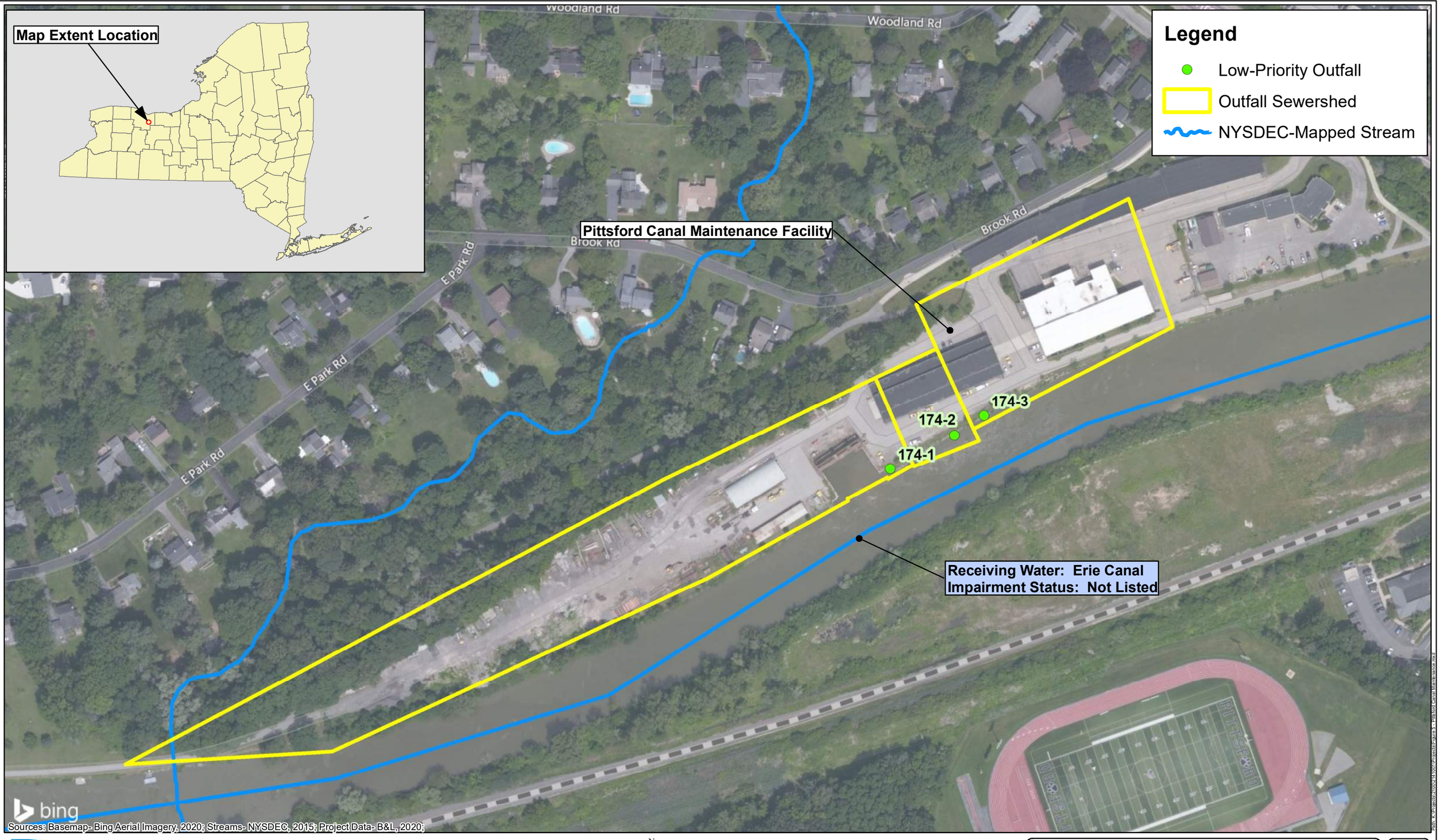
New York State Canal Corporation

Outfall Mapping - Court Street Dam

Oswego County December 2020 New York

Figure 4

Project No. 1983.001



Barton & Loguidice

N W E S

1 inch = 150 feet

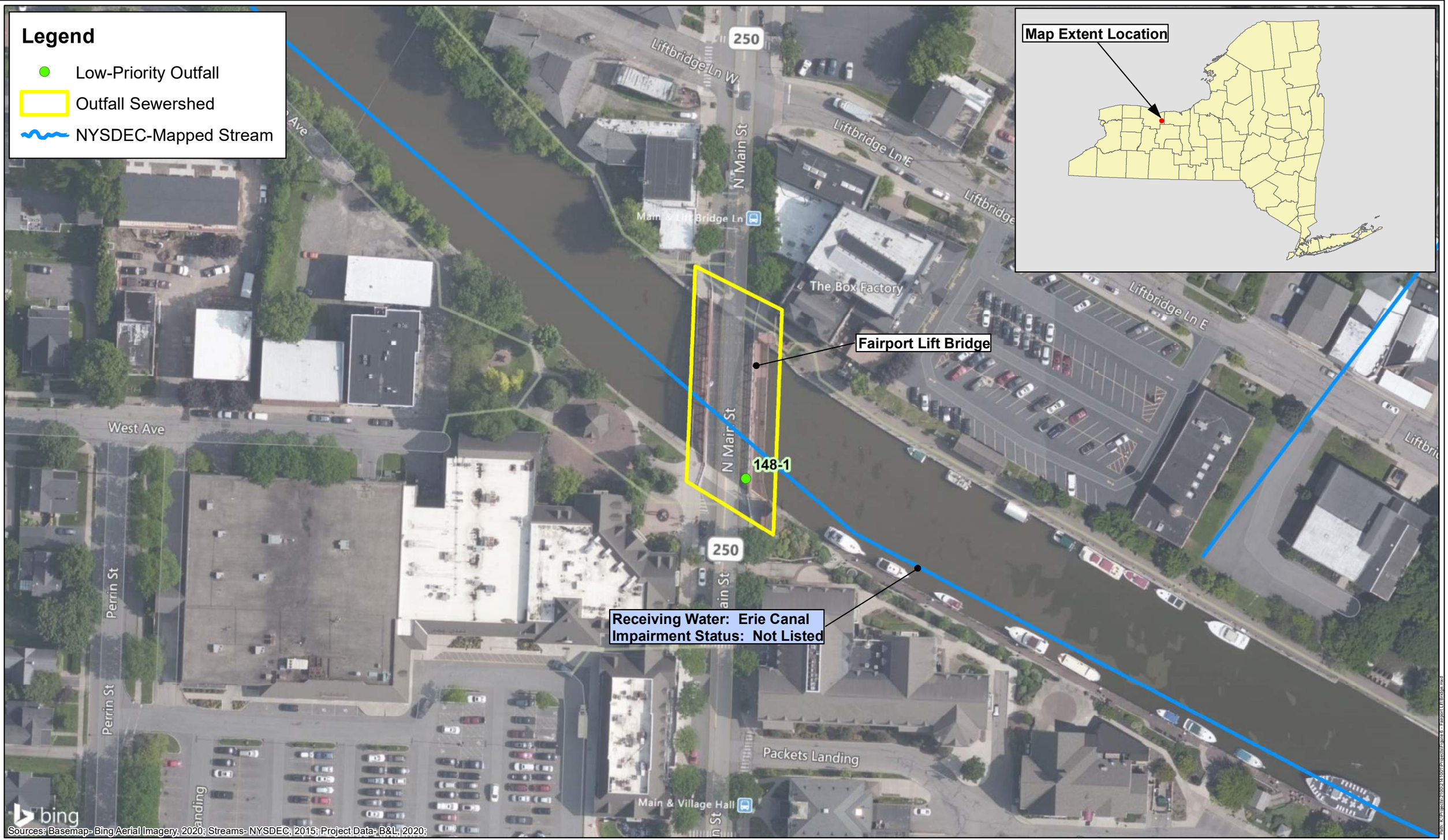
New York State Canal Corporation

Outfall Mapping - Pittsford Canal Maintenance

Monroe County | December 2020 | New York

Figure 5

Project No. 1983.001



Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 75 feet

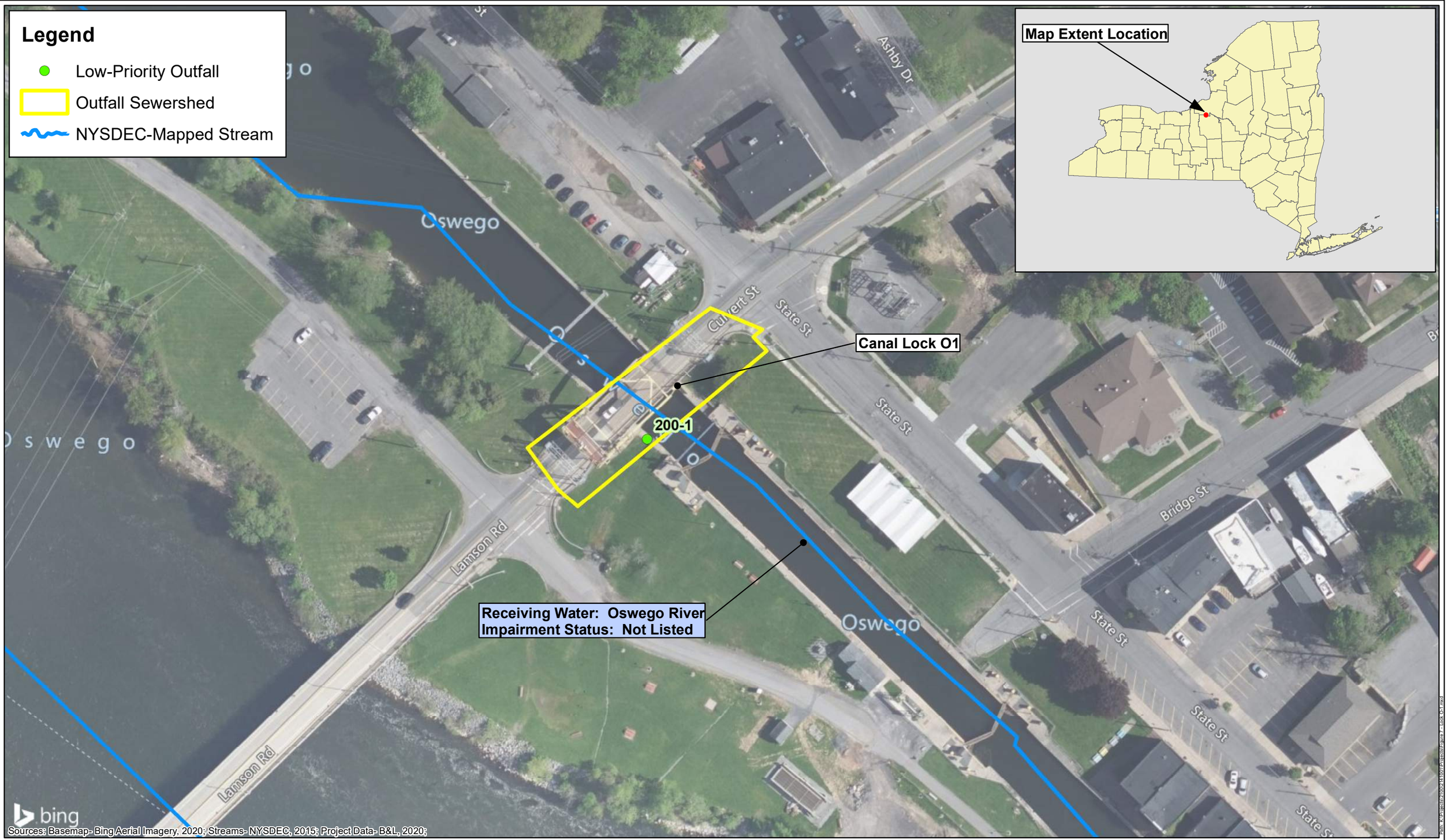
New York State Canal Corporation

Outfall Mapping - Fairport Lift Bridge

Monroe County | December 2020 | New York

Figure 6

Project No. 1983.001



Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 75 feet

New York State Canal Corporation

Outfall Mapping - Canal Lock O1

Monroe County | December 2020 | New York

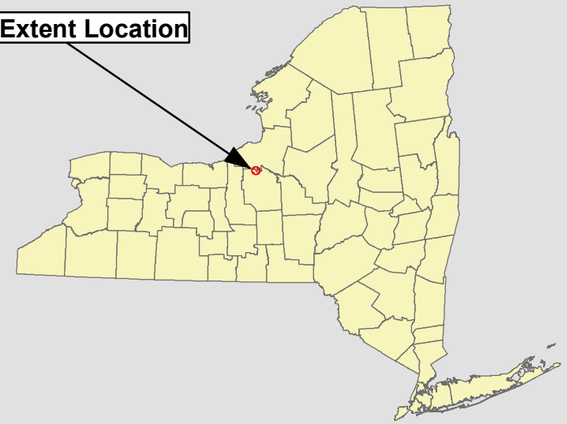
Figure 7

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream
- County Boundary

Map Extent Location



Lysander Canal Maintenance Facility

Receiving Water: Oswego River
Impairment Status: Not Listed

136-1

Oswego County

Onondaga County

River Rd

Greenleafe Dr N

Tanwood Circle

Frenchmans Creek Dr

Oswego

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 200 feet

New York State Canal Corporation

Outfall Mapping - Lysander Canal Maintenance

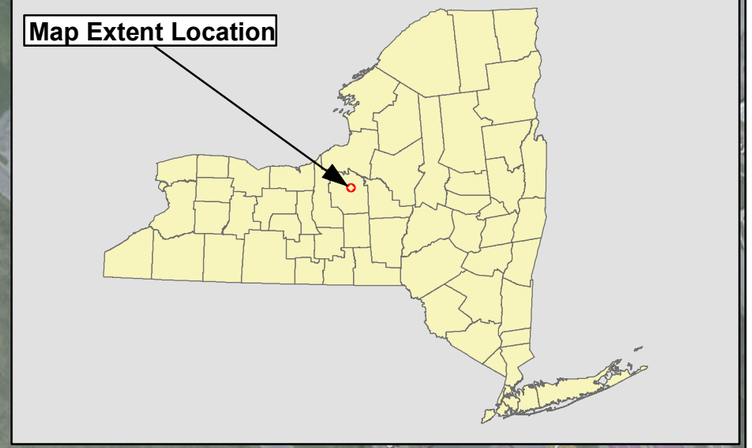
Onondaga County | December 2020 | New York

Figure 8

Project No. 1983.001

Legend

- High Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream (Impaired)



Syracuse Canal Maintenance and Terminal

195-1

195-2

Receiving Water: Onondaga Creek, Lower
Impairment Status: Impaired
Pollutants of Concern: Ammonia, Pathogens, & Turbidity

Syracuse Inner Harbor
Bear St W
298
Onondaga Creekwalk
Van Rensselaer St
N Clinton St
W Court St
Solar St
W Kirkpatrick St
Genant Dr
21

bing

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N
W E
S

1 inch = 200 feet

New York State Canal Corporation
Outfall Mapping -
Syracuse Canal Maintenance and Terminal
Onondaga County December 2020 New York

Figure 9

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Map Extent Location

Receiving Water: Erie Canal
Impairment Status: Not Listed

193-1
Lock 20 Canal Park

193-2

Canal Lock E20

State Route 291
Mohawk River
Erie Canalway Trail
River Rd
Columbus Dr
Horatio Ave
Park Rd
Decks Creek
49

bing

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N
W E
S

1 inch = 300 feet

New York State Canal Corporation

Outfall Mapping - Lock E20

Oneida County December 2020 New York

Figure 10

Project No. 1983.001

Legend

- High Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream
- NYSDEC-Mapped Stream (Impaired)

191-3

191-2
(Major Outfall)

191-1

Receiving Water: Utica Harbor
Impairment Status: Impaired
Pollutants of Concern: Dissolved Oxygen/Oxygen Demand, Floatbles & Pathogens

NOTE: Outfall 191-3 discharges to ditch prior to entry to Utica Harbor

Utica Canal Maintenance Facility

Harbor Lock Rd W
Harbor Lock Rd E
N Genesee St
Frederick Pl E
Wells Ave
Harbor Point Rd
Meadow St
Lee St W
Lee St E
Washington St
Water St
Wurz Ave
Leland Ave
Railroad St

bing

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 400 feet

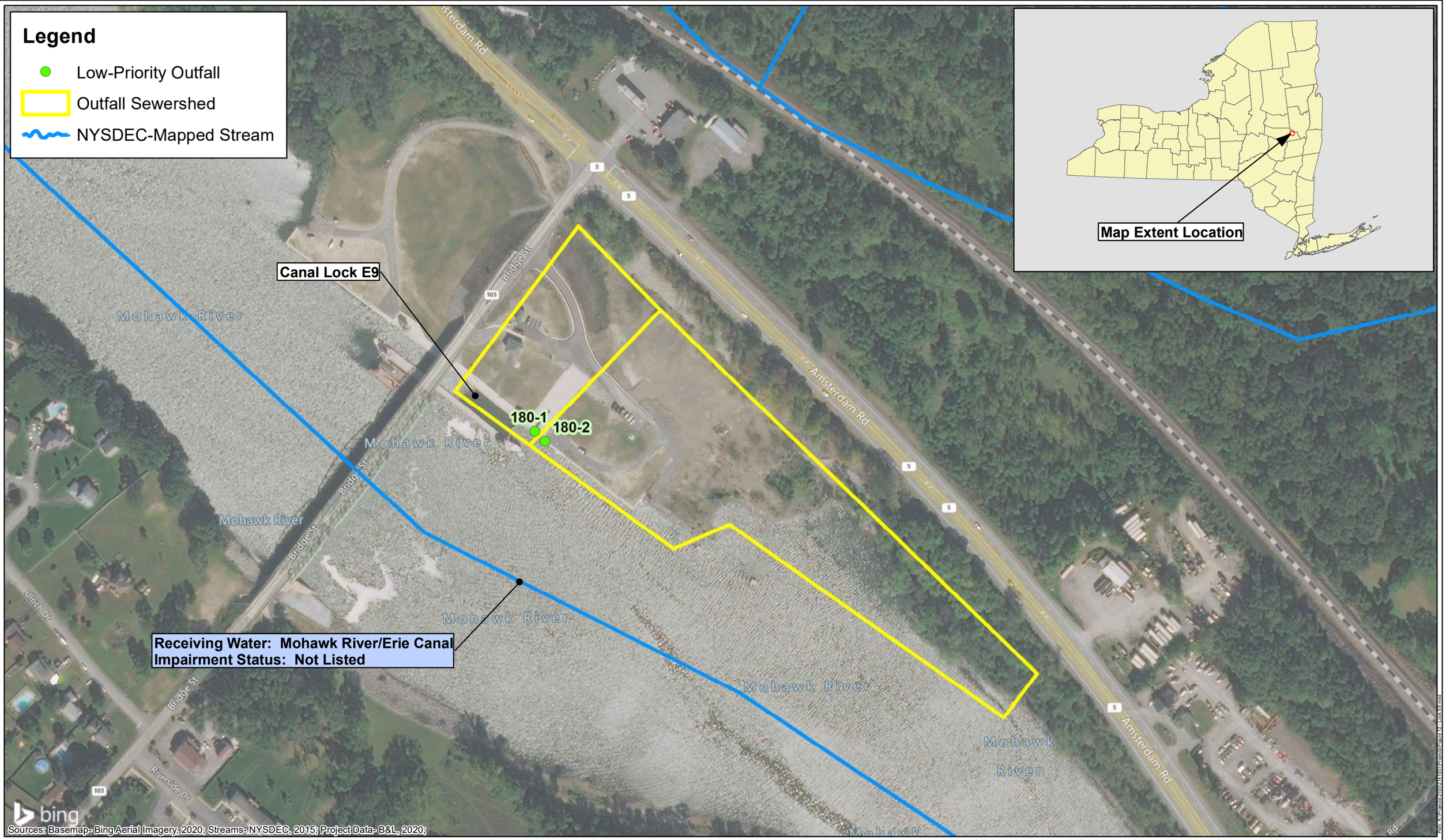
New York State Canal Corporation

Outfall Mapping - Utica Canal Maintenance

Oneida County | December 2020 | New York

Figure 11

Project No. 1983.001



Barton & Loguidice

N W E S

1 inch = 200 feet

New York State Canal Corporation

Outfall Mapping - Lock E9

Schenectady County December 2020 New York

Figure 12

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Receiving Water: Erie Canal
Impairment Status: Not Listed

NOTE: Outfall 193-2 discharges to ditch prior to entry to the Erie Canal

193-1
Lock 20 Canal Park

193-2

Canal Lock E20

State Route 291
Erie Canalway Trail
River Rd
Mohawk River
Columbus Dr
Horatio Ave
Park Rd
Decks Creek
49

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 300 feet

New York State Canal Corporation

Outfall Mapping - Lock E8

Schenectady County December 2020 New York

Figure 13

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream

Flight Lock Rd

Fonda Rd

187-1

Receiving Water: Erie Canal
Impairment Status: Not Listed

Canal Lock E4

bing

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 100 feet

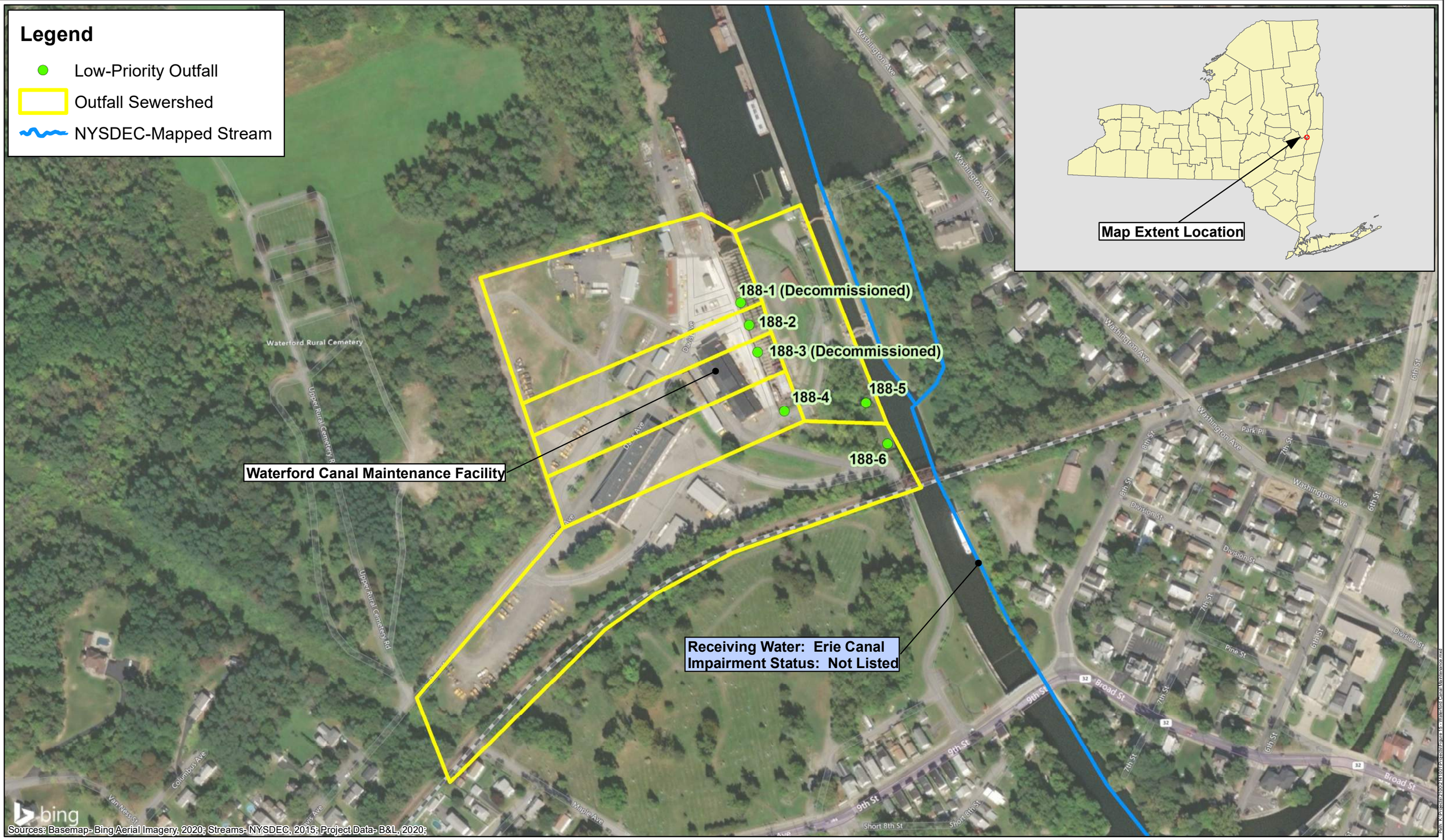
New York State Canal Corporation

Outfall Mapping - Lock E4

Albany County | December 2020 | New York

Figure 14

Project No. 1983.001



Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

N W E S

1 inch = 250 feet

New York State Canal Corporation

Outfall Mapping - Waterford Canal Maintenance

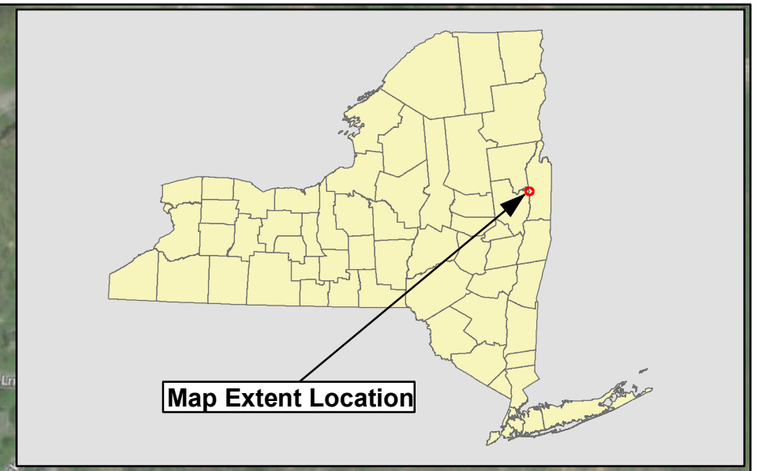
Albany County — December 2020 — New York

Figure 15

Project No. 1983.001

Legend

- Low-Priority Outfall
- Outfall Sewershed
- NYSDEC-Mapped Stream



181-2

181-1

182-2

182-1

182-3

Lock C7

Receiving Water: Hudson River/Champlain Canal
Impairment Status: Not Listed

Fort Edward Maintenance and Terminal

Receiving Water: Champlain Canal
Impairment Status: Not Listed

Broadway

State Route 4

Hudson River

Sources: Basemap- Bing Aerial Imagery, 2020; Streams- NYSDEC, 2015; Project Data- B&L, 2020;

Barton & Loguidice

1 inch = 350 feet

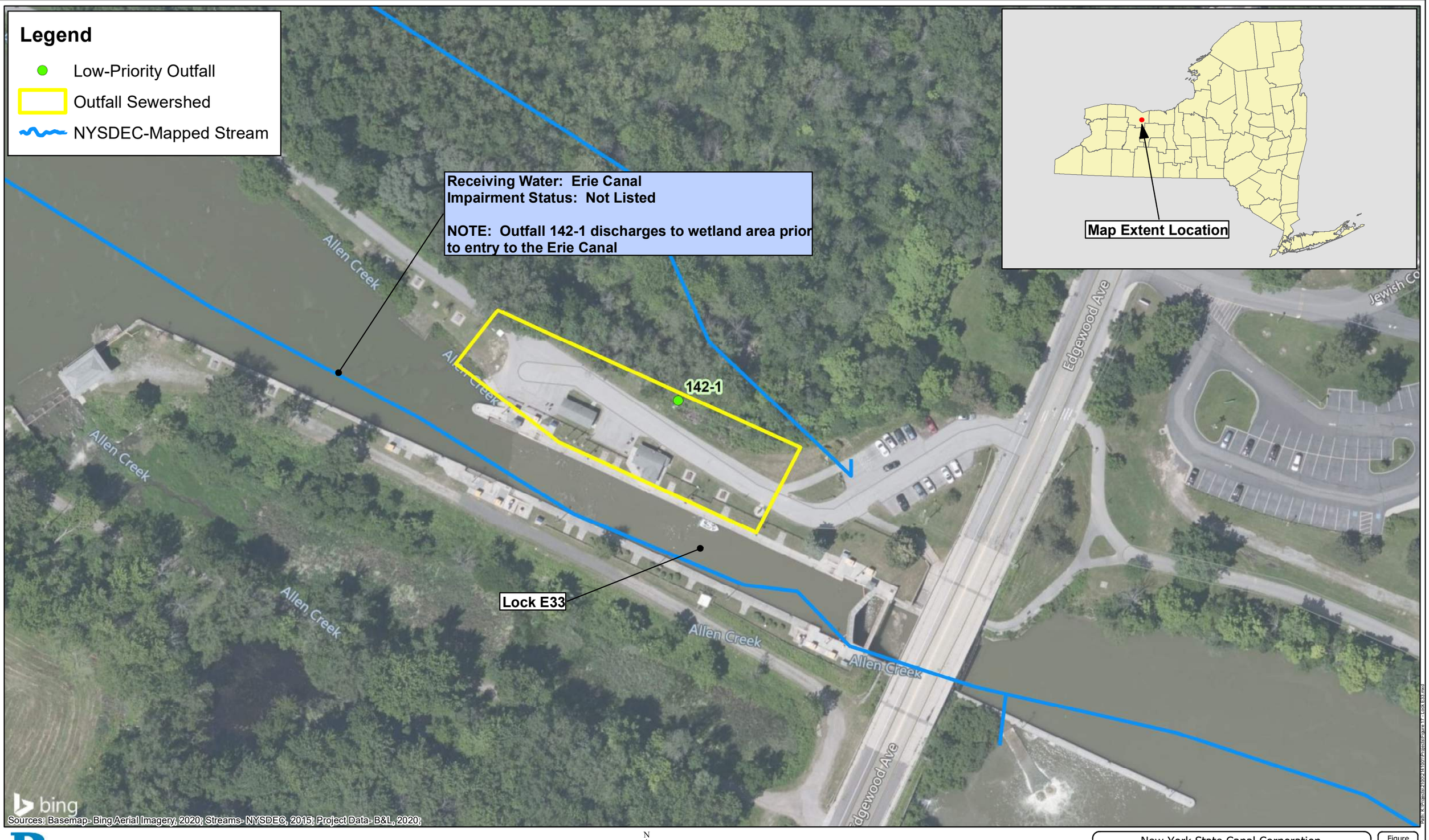
New York State Canal Corporation

Outfall Mapping - Lock C7 and Fort Edward Maintenance and Terminal

Saratoga County December 2020 New York

Figure 16

Project No. 1983.001



Barton & Loguidice

N W E S

1 inch = 75 feet

New York State Canal Corporation

Outfall Mapping - Lock E33

Monroe County December 2020 New York

Figure 17

Project No. 1983.001

Barton & Loguidice

N W E S

1 inch = 150 feet

New York State Canal Corporation

Outfall Mapping - Lock C1

Saratoga County December 2020 New York

Figure 18

Project No. 1983.001

Appendix E: Outreach and Education Materials

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Protecting Our Waters

Know What's In The Flow

Stormwater is the water that flows over the ground after it rains, snows, or sleets. It can become polluted as it runs over hard surfaces and flows downstream. Polluted runoff that discharges to our waterways, including the Canal, is considered an *illicit discharge*. These discharges can create environmental and public health and safety hazards.

Where Stormwater Flows, Everything Goes

Keep an eye for potential stormwater pollutant sources including:

- Trash & debris
- Pet waste
- Unmaintained septic systems or improper sanitary waste management
- Car wash runoff directed to storm drains or streams
- Oil and gas spills
- Improper disposal of boat bilge and boat maintenance activities
- Improper disposal of household hazardous wastes
- Draining of swimming pools to storm drains
- Fertilizers and pesticides from landscaping activities
- Poor best management practices at maintenance facilities
- Improper erosion and sediment control measures at construction sites
- Improper disposal of vegetation in waterways rather an upland areas

To report stormwater concerns, call:

1-800-4-CANAL-4

For more information visit our webpage at:
https://www.canals.ny.gov/community/environmental/

EPA

Be Stormwater Smart

Be St rmwater Smart

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Stormwater: Where It **Flows,** Everything **Goes**

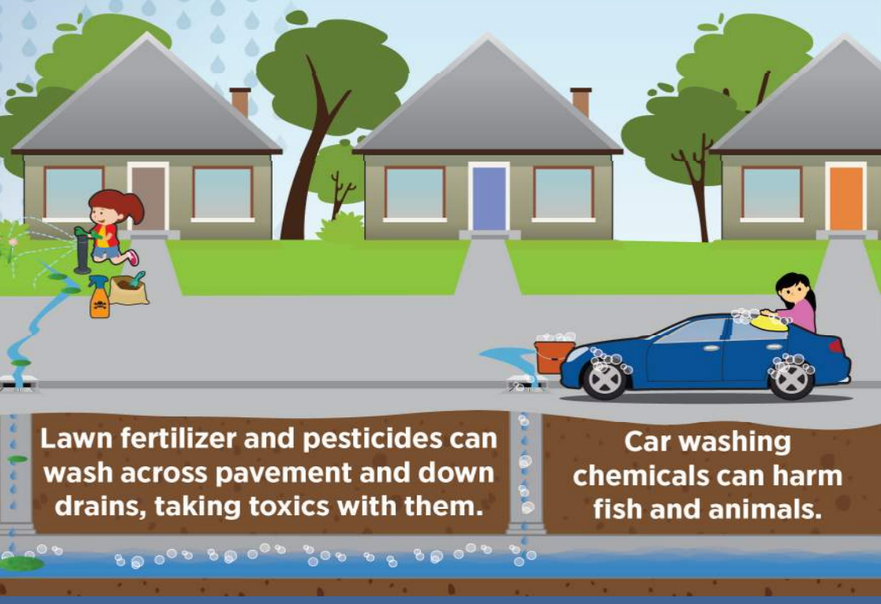
When it rains, snows, or sleets, water hits hard surfaces and takes anything on that surface with it, through drains, pipes, and ditches to local rivers, lakes, and streams.

Cigarette butts in the gutter become a real problem when they reach wildlife.

Trash left on sidewalks gets swept into sewers and contaminates stormwater.

Pet waste washes into pipes and pollutes parks and recreation areas downstream.

Oil and grease leaked from cars washes down drains and into waterways.



Lawn fertilizer and pesticides can wash across pavement and down drains, taking toxics with them.

Car washing chemicals can harm fish and animals.

Where Stormwater Flows, Everything Goes

EPA

Be Stormwater Smart

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Where Stormwater Flows, Everything Goes

EPA

Be Stormwater Smart

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Where Stormwater Flows, Everything Goes

EPA

Be Stormwater Smart

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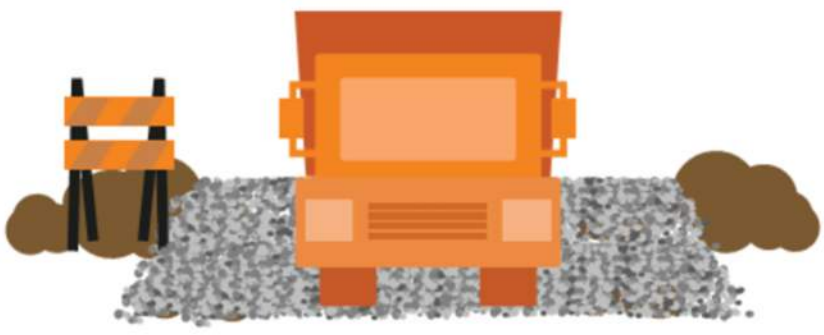
Where Stormwater Flows, Everything Goes

EPA

Be Stormwater Smart

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

When water from rain, snow, or sleet flows over the ground it's called "stormwater." Stormwater can pick up sediment, chemicals, and oil as it travels over the ground on your job site. And when that stormwater flows into street gutters, storm drains, and downstream, it can pollute rivers, lakes, and

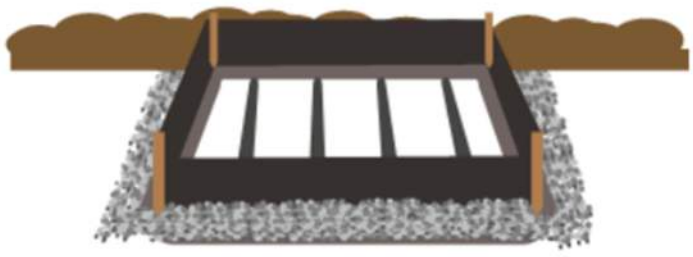


Stop Mud In Its Tracks

Sediment clogs drains and pollutes stormwater. Install and maintain a pad at the construction entrance so vehicles don't track mud and dirt onto roads.

Fence In The Flow

Install silt fences or other barriers on the downhill portion of construction sites and soil stockpiles to prevent rain from washing soil and sediment downstream.



Keep Inlets Clean

Install inlet protection around storm drains to keep loose sediment and muddy water out of storm sewer pipes.

Store Stuff Safely

Keep paint, fuel, and chemicals in dry, covered storage areas. Properly disposed of these liquids in designated areas and use concrete washout areas for concrete waste.

EPA

Be Stormwater Smart

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

When water from rain, snow, or sleet flows over the ground it's called "stormwater." Stormwater can pick up sediment, chemicals, and oil as it travels over the ground on your job site. And when that stormwater flows into street gutters, storm drains, and downstream, it can pollute rivers, lakes, and streams.

Ditch The Hose

Use special oil-absorbing towels or other materials to clean up oil or other fluid from vehicles and equipment instead of hosing it off. Dispose of all materials properly.

Catch Every Drop

Always use drip pans when changing motor oil to ensure fluids do not leak onto hard surfaces and run into storm drains. Never dump fluids from vehicles and equipment down storm drains. Engine oil sand sludge can clog drains and pollute out water.

Store Stuff Safely

Keep equipment, vehicle parts, batteries, used oil filters, and liquids indoors in a dry, covered place so rain cannot wash pollutants down the drain.

Dispose Responsibly

Dispose of used oil, antifreeze, solvents, filters, tires, and batteries properly to keep pollution out of waterways.

EPA

Prevent Stormwater Pollution

CONNECTING THE DROPS

Canal Maintenance Facilities

The New York State Department of Environmental Conservation (NYSDEC) has issued a new General Permit for stormwater management. This informational poster was developed as a reminder of the proper operating procedures that will help reduce the risk of stormwater pollution and to satisfy some of the requirements of the new regulations.

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

DO — Vessel Operation and Maintenance — DON'T

- Do not ignore spills and/or leaks
- Do not top off gas tanks during fueling, and always keep absorbent pads/booms nearby to collect spills.
- Discharge all sanitary waste at onshore pump-out facilities.
- Dispose of bilge water by pumping into drums, or dispose through an Environmental Cleanup Contractor.

DO — Dry Dock Operations — DON'T

- Prior to filling dry dock, inspect bottom and dispose of all litter and debris.
- When power washing vessel hulls containing chipped and flaking paint, install sediment traps (i.e. hay bales or silt fence) within channel on dry dock floor to capture solids prior to discharging.
- Use oil absorbent booms around vessels during engine/motor work.

DO — Hazardous Waste Storage — DON'T

- Properly store hazardous wastes in sealed, labeled drums
- Place drums in a fenced area secured with a lock
- Tops of drums should be clean
- Routinely inspect areas for leaks and/or drum deterioration

DO — Waste Product Storage and Disposal — DON'T

- Change fluids carefully to avoid spills and store separately in labeled drums or tanks
- Inspect stored vehicles, equipment and drums for leaks
- NEVER dump chemicals or vehicle fluids down the drain

DO — Vehicle and Equipment Wash Water — DON'T

- Wash vehicles and equipment in designated enclosed wash bay areas
- Never use detergents or hot water when washing vehicles unless specifically allowed by the facility's discharge permit

DO — Chemical and Vehicle Fluid Spills/Leaks — DON'T

- Contain and immediately clean up fluid leaks and spills using absorbent materials to prevent material from being tracked elsewhere or washed into the storm drain
- Keep spill kits close to areas where spills can occur
- Notify the DEC Spill hotline (1-800-457-7362) when:
  - the spill is greater than 5 gallons, or
  - the spill has entered the waters of the state, or
  - the spill is not contained and is not under control, or
  - the spill is not cleaned up within 2 hours of discovery.

Be on the Lookout for Illicit Discharges

Failing Septic Systems

Motor Oil or Chemicals Dumped into Catch Basins

An illicit discharge is any discharge to a storm sewer system or stream that is not comprised entirely of stormwater, except for discharges allowed under a NYSDEC permit

Notify your Section Supervisor if an illicit discharge is suspected on or near the Canal property

Floor Drains Connected Directly to Storm Sewer

Illicit Sewer Discharges

For more information contact your Division Environmental Specialist or Point of Contact

TAP-417

Clean Water Everyone can Help!

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

Why is clean water important to you?

Everyone depends on clean water to live; and therefore, has a responsibility to keep it clean.

In order to protect all of New York's water, it is important to understand how pollution can contaminate our rivers, lakes and streams.

What is a watershed?

A watershed is an area of land where all the water that falls in it and drains off it goes to the same place.

For example, all of the water in the Hudson River watershed eventually flows into the Hudson River. The entire Hudson River Watershed is 13,400 square miles…an area larger than the state of Massachusetts.

Why are watersheds important?

We all live in a watershed. What we do, and where we live affects the water quality of our local watershed.

Making sure that we keep our watershed clean and healthy means that we have clean water to drink, can take part in fun recreational activities such fishing, canoeing and swimming, and have safe habitats for wildlife to live in.

How do things we do affect the watershed?

When it rains or snows, some of the water is absorbed into the ground through the soil or evaporates back into the air.

The rest of the water, referred to as "stormwater runoff," flows over the ground and can enter streams, creeks, or rivers through storm drains, like the one you may have on your street.

Because hard covered surfaces like streets and driveways can't absorb water, the water flows over the surface and can collect pollutants on the street like motor oil, spilled chemicals, pesticides and litter.

Pollutants are things that harm our natural resources like our air or water.

How does the water become polluted?

Sometimes water can become polluted in obvious ways, like when people throw litter onto the ground that ends up in a local creek.

Other times people may not realize that they could be contaminating their local waters if they are not careful when they do things like wash the car, use too many chemicals on the lawn or don't pick up after their pet.

Only Rain Down the Drain

Drains to Waterway

What you can do to prevent pollution to waterways.

The New York State Thruway Authority/Canal Corporation is working to prevent pollution to waterways.

- The New York State Thruway Authority and Canal Corporation have embarked on a "Connecting the Drops" campaign to help educate you and your friends on the importance of water quality and stormwater pollution prevention.

- Your help is needed to let all New Yorkers know about the important things that can be done as a community to keep the waterways of New York clean.

Here are a couple of things that you can do.

- Never dump anything down the storm drain! It is meant only for rainwater.
- When you see litter pick it up and throw it out.
- Wash the family car on the lawn, not on the road or driveway.
- Ask your parents to minimize the use of fertilizers and pesticides, which can be harmful to the environment.
- Pick up after your pets! Their waste sometimes contains harmful bacteria that can pollute streams and lakes.
- Adopt a local stream and clean it up!

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

HOW TO IDENTIFY ILLEGAL DISCHARGES AND DUMPING:

What to look for —

Discolored Water

Oil Sheen on Shoreline

Soap Suds or Foam

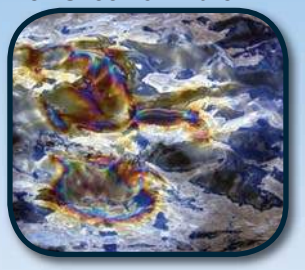
Toilet Debris or Gray Water

Excessive Trash

Tires

Drums

Oil Sheen on Water



Identifying Odors —

- *Solvent or gas*
- *Rotten egg*
- *Sewage*
- *Chlorine*
- *Detergent*

What you drop means a lot: Prevent pollution from entering the Canal

VESSEL OPERATION & MAINTENANCE

Remember:

- Do not top off gas tanks during fueling, and always keep absorbent pads/booms nearby to collect spills.
- Discharge all sanitary waste at onshore pump-out facilities.
- Do not discharge bilge water that is oily or has a sheen, instead pump oily water into drums. Do not use detergents to clean bilge.
- Clean boat bottoms ashore over hard surfaces or on a tarp, where paint chips and other debris can be contained and disposed of properly.
- Use non-toxic, phosphate-free biodegradable cleaners on your vessel.
- Always dispose of your trash properly.

For additional information about the Canal Corporation's Stormwater Management Program, contact:

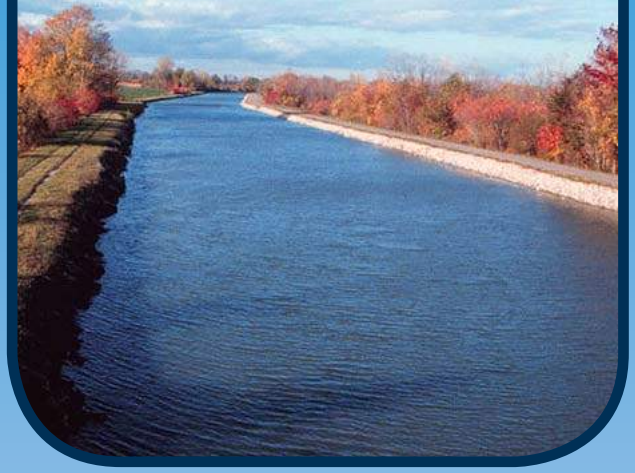
Environmental Services Bureau
200 Southern Boulevard
P.O. Box 189
Albany, NY 12201-0189

Phone: (518) 436-3190
www.thruway.ny.gov/oursystem/environmental/waterquality.html

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Help Keep the Canal Clean



What you can do to help

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

Through its *Connecting the Drops* campaign, the New York State Canal Corporation, in conjuntion with the New York State Thruway Authority, is working to keep the canals and waterways clean. You can help by preventing stormwater pollution. Together we can make a difference.

Q. What is an illegal discharge?

A. Any discharge to the Canal or one of its tributary streams that is not entirely stormwater runoff.

Q. Why should you care?

A. Pollutants from illegal discharges can harm people, plants, fish and animals.

Sources of Illegal Discharges:

- *Wastewater from industry, commercial buildings, or homes*
- *Oil or chemicals dumped in a storm drain*
- *Cross-connections with sewer system*
- *Untreated wastewater*
- *Car wash wastewater*
- *Mobile power washer wastewater*
- *Improper plumbing hooked into storm drains*
- *Chemical or oil spills that enter storm drains*
- *Dumping drums containing oil or other chemicals*

POLLUTANTS AND THEIR IMPACTS

POLLUTANT	*SOURCE*	*IMPACTS*
Trash and litter	Littering and illegal dumping	Litter can reach lakes and streams and choke or suffocate ducks, fish, turtles or birds.
Bacteria and disease-causing organisms	Sewage, leaking septic systems	Bacteria and germs can reach swimming areas, causing beach closures and creating health hazards.
Chemicals and oil	Illegal dumping or runoff of pesticides, paints, solvents or motor oil	Chemicals and oil can poison aquatic life. Animals and people can be at risk from eating contaminated fish or drinking polluted water.
Nutrients	Runoff of fertilizers or detergents	Nutrients cause algae to grow, which absorbs the oxygen that aquatic life need to live.

The Canal Corporation's historic Tug Urger on the Erie Canal

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

OIL WATER SEPARATOR MAINTENANCE

Maintenance of Oil Water Separators (OWS) is Required to Ensure that They Function Properly.

CONNECTING THE DROPS

OWS remove *small quantities* of oil from wastewater discharges. OWS are less effective when there are high levels of oil and sediment buildup. Inspection and maintenance of OWS is the responsibility of the Thruway/Canal Section Maintenance Supervisor in coordination with the Division Facilities Engineer and Division Environmental Specialist.

HIGH OIL LEVEL

- Do not dump oil into OWS.

No Degreasers or Detergents

DETERGENTS/DEGREASERS

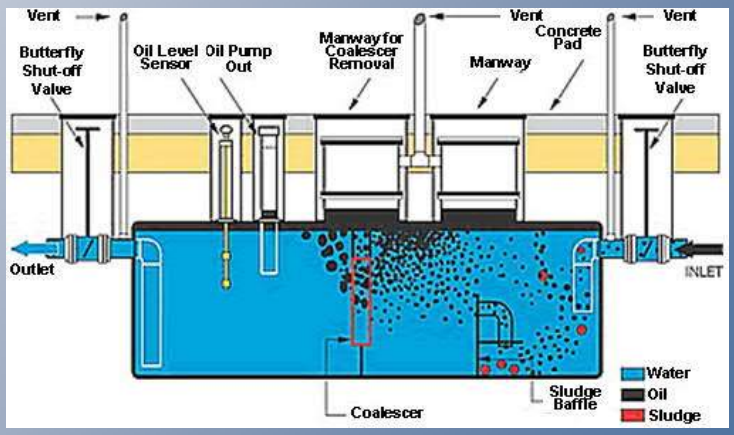
- Only non-emulsifying cleaning agents (**Thruway Part # 72020357**) are permitted in wash bays with OWS, with the exception of the locations identified below.
- Only high-pressure cold water is permitted at wash bays in the following locations: **Harriman, Kingston, Catskill, Berkshire, Verona and Weedsport**.

PRODUCT RELEASES INTO OWS

- Report all petroleum releases to your immediate supervisor or the Division Environmental Specialist.
- If a major petroleum release occurs in a wash bay equipped with OWS, close the shutoff valve on the outlet side of the OWS to trap the release and/or plug/cover the floor drain into the OWS.

INSPECTIONS AND MAINTENANCE

- Inspect floor drains, trench drains, sand interceptors and traps monthly and remove debris.
- Inspect the inside of the OWS for sand, trash, sludge and oil level monthly, and perform maintenance in accordance with the OWS manufacturer's maintenance guidelines. These guidelines are available from the Division Facilities Engineer.
- Immediately after washing mowing equipment remove all grass clippings/debris from floor drains, trench drains, catch basins, sand interceptors and traps.
- During the winter season, perform weekly inspections and maintenance.
- Schedule annual cleaning/emptying of OWS with contractor through the Section Maintenance Supervisor in coordination with the Division Environmental Specialist.
- Schedule testing and effluent monitoring as needed through the Division Environmental Specialist.



Example of an OWS. This does not reflect, in all cases, what is installed in all Divisions.

YOUR CAR

- Do not rinse leaks or spills down the storm drain. Clean up fluids with sand or kitty litter and dispose of the material properly.
- Dispose of used motor oil and fluids at proper locations, such as the local auto center.
- Wash your car on your lawn instead of in your driveway to prevent detergents from washing into the storm sewer.
- Notify the Thruway Authority if you see oil puddles in their parking lots.

YOUR PET

- Always properly cleanup after your pet.
- Do not dispose of pet waste in storm drains, culverts, ditches, lakes or streams.

YOUR HOME

- Use phosphorus free detergents when washing your car or home.
- Plant vegetation on bare soils or cover with mulch to reduce erosion. Select native plants and grasses that are drought and pest resistant.
- Limit fertilizer and pesticide use on lawns and gardens. Have your soil tested and apply only what is needed. Avoid application if the forecast calls for rain.
- Septic tanks require regular pumping and maintenance in order to prevent leaks.
- Reduce stormwater runoff by reducing the amount of impervious surface on your property; directing roof drains and gutters to rain barrels, gardens, and other vegetated areas; and using trees, shrubs, and other deep rooted plants to retain stormwater.

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

THE THRUWAY AUTHORITY AND THE CANAL CORPORATION ARE WORKING TOGETHER TO PROTECT CLEAN WATER IN NEW YORK STATE. THE GOAL OF THE STORMWATER MANAGEMENT PLAN IS TO PREVENT THE POLLUTION OF STORMWATER RUNOFF FROM ALL THRUWAY AND CANAL FACILITIES.

For additional information about the Thruway Authority's and Canal Corporations's Stormwater Management Program, contact:

Environmental Services Bureau
200 Southern Boulevard
P.O. Box 189
Albany, NY 12201-0189

Phone: (518) 436-3190
www.thruway.ny.gov/oursystem/environmental/waterquality.html

NEW YORK STATE OF OPPORTUNITY. Thruway Authority

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

STORMWATER POLLUTION PREVENTION

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

What YOU can do to HELP

Reduce Phosphorus and Nitrogen

WHAT IS STORMWATER?

Stormwater runoff occurs when rain or snowmelt flows over the landscape. Impervious surfaces, such as roads, parking lots and buildings, prevent runoff from entering into the ground. Stormwater enters lakes and rivers as runoff or is collected by a storm sewer. The storm sewer discharges untreated water directly into lakes and rivers.

WHAT IS WATERSHED? WHY SHOULD WE PROTECT IT?

A watershed is a region in which surface and groundwater drain from high to low elevations into rivers and lakes. We all work and live within watersheds. This means that pollution spilled or dropped in a parking lot or on the ground can reach a river, stream or other body of water far away.

WHAT IS THE ROLE OF PHOSPHORUS AND NITROGEN IN THE ENVIRONMENT?

Phosphorus and nitrogen play major roles in the production of energy and are key nutrients necessary for the growth of plants and animals.

WHAT ARE THE SOURCES OF PHOSPHORUS AND NITROGEN?

Phosphorus and nitrogen occur naturally in minerals and soil, animal waste, and plant material. Runoff from agriculture and development, pollution from septic systems and sewers, and other human-related activities increase both inorganic nutrients and organic substances in aquatic ecosystems.

Even grass clippings and leaves entering the storm sewers can be a problem. Studies have shown that decomposition of these organic materials increase the levels of phosphorus in water bodies.

HOW DOES PHOSPHORUS AND NITROGEN BECOME POLLUTION?

Like with our lawns and gardens, nitrogen and phosphorus stimulate aquatic plant growth. Too much phosphorus and nitrogen accelerate the process of eutrophication in which estuaries, bays and lakes become marshes, swamps and bogs.

Plant growth on the water surface prevents sunlight from reaching plants deeper in the water. When these plants die and decompose, it depletes the oxygen needed by aquatic animals. Algal blooms can also clog plumbing, and create foul tasting and smelling water.

YOUR TRASH AND CIGARETTES

- Put your cigarette butts and other trash in the garbage, not on the ground.
- Do not empty ash trays in parking lots or waterways.
- When boating, put your trash in bags and dispose of it when you come ashore.
- Never litter out of your car or boat.

ILLEGAL DUMPING

- Never dump oil or other fluids in storm drains, culverts, ditches, or waterways.
- Empty portable toilets at pump stations, not into waterways.
- What is dumped or spilled on roads and in parking lots will eventually reach NY's canal, lakes, rivers or streams.

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

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NEW YORK STATE OF OPPORTUNITY. Thruway Authority

NEW YORK STATE OF OPPORTUNITY. Canal Corporation

Stormwater Pollution Prevention

What you can do to help

CONNECTING THE DROPS

NEW YORK STATE THRUWAY AUTHORITY & CANAL CORPORATION: WORKING WITH YOU TO PROTECT CLEAN WATER

STORMWATER RUNOFF

can be rain or snowmelt. It flows over roofs, lawns and pavement and is then carried by pipes, culverts and ditches to lakes and streams.

THIS RUNOFF CAN BECOME POLLUTED

by the litter, dirt, chemicals and oils it picks up along the way, and it often flows into the water used for swimming, fishing and drinking.

CONTAMINATED RUNOFF CAN HARM PLANTS, ANIMALS AND PEOPLE

OIL and OTHER CHEMICALS like pesticides, fertilizers, paints and motor oil can poison fish and other plants and animals that live in the water. People and animals that drink this water or eat the fish can become sick.

DEBRIS such as plastic bags, six-pack rings and cigarette butts that reach waterways can choke or suffocate ducks, fish, turtles or birds.

BACTERIA and PATHOGENS from pet waste or failing septic systems can reach swimming areas. This is a health hazard and often causes beach closures.

NUTRIENTS from fertilizers or detergents stimulate the growth of algae. When these algae die and decompose, this depletes the supply of oxygen for fish and other organisms.

SEDIMENT from soil erosion clouds water, destroying places where plants and aquatic animals live.

WHAT CAN I DO?

You can prevent stormwater pollution by:

YOUR CAR

- Routinely check your car for leaks.
- Do not leave tires or other car parts on the side of the highway.
- Notify the Authority when you see oil puddles in service area parking lots.

YOUR BOAT

- Do not discharge water that is oily.
- Do not use detergents to clean bilge.
- Use non-toxic, phosphate-free biodegradeable cleaners.
- Clean boat bottoms ashore, where all debris can be contained and cleaned up.
- When fueling, avoid spilling or overfilling and keep oil absorbing pads aboard.

YOUR PET

- Always pick up your pet's waste.
- Flushing pet waste is the best option.
- Do not dispose of pet waste in storm drains, culverts, ditches, lakes or streams.

Appendix F: Public Comment Tracking

Public Comments Received

Date of Comment	Regarding	First Name	Last Name	Phone	Email	Address	Comment	Response

Appendix G: IDDE Forms

CANAL DIRECTIVE

NUMBER: 2008-1

SUBJECT:

ILLICIT DISCHARGE IDENTIFICATION AND REPORTING REQUIREMENTS

FROM:

Carmella R Mantello 1/22/08

DIRECTOR OF CANALS DATE

DISTRIBUTION: Canal Supervisors

The purpose of this Directive is to provide guidance in identifying and reporting illicit or inappropriate discharges at culverts/bridges and other storm sewer outfalls along the Canal Right-of-Way and at storm sewer outfalls at Canal Corporation (Corporation) facilities.

An illicit discharge is any discharge to a storm sewer or stream that is not comprised entirely of stormwater, except for discharges allowed under a New York State Department of Environmental Conservation permit. Such discharges may come from Corporation operations and facilities, or from neighboring facilities, communities, properties or Canal patrons.

Typical Sources of Illicit Discharges:

- Failing or overloaded oil water separators;
- Failing septic systems and cross connections with sanitary sewer systems;
- Illegal dumping in catch basins and floor drains;
- Spills or other process-related wastes that run off into catch basins or ditches used to convey stormwater.

Evidence of Illicit Discharges:

- Visual - grey or colored discharges, evidence of sewage, foam, soap suds, or oil sheens;
- Odors - those associated with sewage, chlorine, detergents, petroleum, or other chemicals.

Additional information on outfall mapping and illicit discharge detection, including examples, can be found on the Maintenance and Operations Intranet page under Stormwater Management Program.

In the course of daily activities, employees may discover evidence of illicit discharges at Corporation facilities or along the Canal Right-of-Way. If an illicit discharge is suspected, employees should notify their immediate Supervisor. Supervisors shall notify the Division Environmental Specialist (DES) for further investigation and follow-up.

The DES shall keep a record of all calls for investigation and the results of their investigation by completing the POTENTIAL ILLICIT DISCHARGE NOTIFICATION/FOLLOW-UP ACTIVITY (TA-N41127-9) form (copy attached).

Copies of completed forms shall be sent to the Director of the Office of Canal Maintenance and Operations, the Director of Environmental Services, the Municipal Separate Storm Sewer Systems (MS4) Coordinator, the Division Canal Engineer and the applicable Section Superintendent. The DES retains the original form permanently.

Where the sources of illicit discharges do not come from Corporation projects and/or activities, the DES shall notify the appropriate regulatory agency (local Health Department and/or Department of Environmental Conservation Regional Office) of the problem for resolution.

Questions related to illicit discharge detection should be referred to your respective DES or the Bureau of Environmental Services in Administrative Headquarters at (518) 471-5926.

Supervisors are instructed to discuss the contents of this Directive with their employees.

Attachment

TA-N41127-9 (01/2008)

POTENTIAL ILLICIT DISCHARGE NOTIFICATION/FOLLOW-UP ACTIVITY

New York State Thruway Authority • New York State Canal Corporation

Instructions:

- To be completed by the Division Environmental Specialist.
- Complete Section I upon Notification.
- Complete Section II upon Resolution/Follow-up. File Original and distribute copies as described below.

I. NOTIFICATION

Call Date	Call From	Section	Location (Mile Post/Canal Location [building/buoy/lock no.]/Direction/CIN*/BIN**)

Observation: (Should include but not be limited to: apparent source; visual evidence; odor; stressed or dead vegetation; stressed or dead aquatic life; etc.)

II. RESOLUTION/FOLLOW-UP ACTIVITY

Further Investigation Required	Source Identified	Action/Who Notified	Notification Date	Resolution Date
☐ Yes ☐ No	☐ Yes ☐ No			

Resolution/Follow-up Activity:

Distribution:

Authority: Original - Division Environmental Specialist; Copies to the Director of Environmental Services, the Municipal Separate Storm Sewer Systems (MS4) Coordinator, the Assistant Superintendent of Thruway Maintenance (Director of Highway Management), the Division Director, the Division Highway Engineer, the applicable Section Supervisor 2, and if applicable, the Division Bridge Engineer, the applicable Bridge Maintenance Supervisor 2, the Division Facilities Engineer and the Facilities Maintenance Supervisor 2.

Corporation: Original - Division Environmental Specialist; Copies to the Division Canal Engineer, the applicable Section Superintendent, the Director of Canal Maintenance and Operations, the Director of Environmental Services and the MS4 Coordinator.

* Culvert Identification Number

** Bridge Identification Number

Monitoring Locations Inspection and Sampling Field Sheet

Section 1: Background Data

Subwatershed:		Monitoring Location ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin, if known):

Section 2: Monitoring Location Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Single ☐ Elliptical ☐ Double ☐ Box ☐ Triple ☐ Other: _____ ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ Rip-Rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____	Depth: ____ Top Width: ___ Bottom Width: ____	
☐ **In-Stream**	**(applicable when collecting samples)**			
Flow Present?	☐ Yes ☐ No	***If No, Skip to Section 5***		
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING MONITORING LOCATIONS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐ Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐ Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stopwatch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Monitoring Locations Inspection and Sampling Field Sheet

Section 4: Physical Indicators for Flowing Monitoring Locations Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (*If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 - Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 - Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 - Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Monitoring Locations

Are physical indicators that are not related to flow present? ☐ Yes ☐ No (*If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Monitoring Location Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Monitoring Location Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☐ No		
2.	If yes, collected from:	☐ Flow	☐ Pool		
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM	☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Appendix H: SWPPP Review Checklist

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER

SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001)

Stormwater Pollution Prevention Plan Review Checklist

Project Name: Site Address:	☐ Basic SWPPP (E&SC Plan)	☐ Full SWPPP
	Municipality: County:	Reviewer:
Owner/Operator: Address:	Phone:	Date:
	Fax:	SPDES General Permit ID Number: NYR10

SWPPP Deficiencies as checked below:

1) ☐ Owner/Operator name, legal address, phone number and email; site address and municipality
2) ☐ Copy of signed Notice of Intent (NOI)
3) ☐ Signature of SWPPP Preparer on NOI (must be a Professional Engineer for SWPPPs with engineered practices)
4) ☐ Contractor (and subcontractors if applicable) certification statement(s) [Part III.A.6. of GP-0-10-001]
5) ☐ MS4 SWPPP Acceptance Form (for projects located in regulated MS4s)
6) ☐ Map from Office of Parks, Recreation and Historic Preservation showing project location and sensitive area (grey zone) boundaries
7) ☐ Letter and map from NYS OPRHP describing measures to mitigate the project's effect on archeologically or historically sensitive areas

Comments:

Existing and proposed mapping and plans (recommended scale of 1" = 50') which illustrate at a minimum:

SWPPP Deficiencies as checked below:

1) ☐ Existing and proposed topography (minimum 2-foot contours recommended)
2) ☐ Vicinity map showing project boundaries and receiving water(s)
3) ☐ Mapping and description of soils from USDA Soil Survey, including hydrologic soil group, as well as location of any site-specific borehole investigations that may have been performed
4) ☐ Boundaries of existing predominant vegetation and proposed limits of clearing
5) ☐ Location and boundaries of resource protection areas such as wetlands, lakes, ponds and other setbacks (e.g. stream buffers, drinking water well setbacks, septic setbacks)
6) ☐ Boundaries and acreages of Runoff Reduction Planning Practices (conservation areas, undisturbed areas, buffers, etc.)
7) ☐ Location of existing and proposed roads, lot boundaries, buildings and other structures
8) ☐ Location and size of staging areas, equipment storage areas, borrow pits, waste areas and concrete washout areas
9) ☐ Existing and proposed utilities (e.g. water, sewer, gas, electric) and easements
10) ☐ Location of perennial and intermittent streams; boundary and acreage of upstream watershed
11) ☐ Location and flow paths of existing and proposed conveyance systems such as channels, swales, culverts and storm drains
12) ☐ Location of floodplain/floodway limits
13) ☐ Location, size, maintenance access and limits of disturbance of proposed temporary and permanent stormwater management and erosion and sediment control practices, including timing and duration of temporary practices
14) ☐ Location and dimensions of proposed channel modifications, such as bridge or culvert crossings
15) ☐ Plans stamped and signed by qualfied professional (must be a licensed professional on plans with engineered practices)

Comments:

Erosion and Sediment Control Plans and Vegetative Measures:

SWPPP Deficiencies as checked below:

1) ☐ Description of temporary and permanent structural and vegetative measures for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out
2) ☐ Material specifications, dimensions, installation details and operations and maintenance requirements for erosion and sediment control practices, including the location and sizing calculations for any temporary sediment basins
3) ☐ Site map/construction drawing(s) showing the specific locations, sizes, and lengths of each erosion and sediment control practice
4) ☐ Identification of any design elements not in conformance with the *New York Standards and Specifications for Erosion and Sediment Control*, reason for the deviation or alternative design, and demonstration that the alternative is equivalent to the technical standard
5) ☐ Inspection and Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices, in accordance with the *New York Standards and Specifications for Erosion and Sediment Control*
6) ☐ Description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable

7) ☐ Construction phasing plan and sequencing plan describing the intended sequence of construction activities, including clearing and grubbing; excavation and grading; implementation, timing and duration of temporary and permanent erosion and sediment control practices; installation of utilities and infrastructure; any other soil disturbing activity; and acreage to be disturbed in each phase

8) ☐ Final landscaping plans for structural stormwater management practices and any reforestation or revegetation

9) ☐ Description of pollution prevention measures to control construction litter, construction chemicals and debris

10) ☐ Description and location of any stormwater discharges associated with industrial activity other than construction at the site, including but not limited to, stormwater discharges from asphalt plants and concrete batch plants on the contruction site

Comments:

For construction activities listed in Table 2 of Appendix B of GP-0-10-001:
Hydrologic and hydraulic analysis for all structural components of stormwater system (e.g. storm drains, open channels, swales, stormwater management practices, manufactured treatment systems, etc.) for applicable design storms including:

SWPPP Deficiencies as checked below:

1) ☐ Existing and Proposed condition analyses for time of concentrations, runoff rates, volumes, velocities, water surface elevations and routing showing methodologies used and supporting calculations

2) ☐ Channel Protection Volume and detention time calculations

3) ☐ Comparison summary of post-development stormwater runoff conditions with pre-development conditions for 1-year, 10-year, 100-year design storms in accordance with the *New York State Stormwater Management Design Manual*

4) ☐ Stormwater management practice sizing calculations using the Enhanced Phosphorus Removal Standards (TMDL watersheds)

5) ☐ Water Quality and Runoff Reduction volume calculations; documentation of Runoff Reduction practices and their treatment volumes

6) ☐ Infiltration/percolation tests, where required; or logs of borehole investigations and supporting geotechnical report

Comments:

Representative cross-section and profile drawings and details of structural stormwater management practices and conveyances (e.g.storm drains, open channels, swales, etc.) which include:

SWPPP Deficiencies as checked below:

1) ☐ Existing and proposed structural elevations (e.g. invert of pipes, manholes, etc.)

2) ☐ Construction drawing(s) identifying the specific locations and sizes of each post-construction stormwater control practice

3) ☐ Description, dimensions, material specifications and installation details for each post-construction stormwater control practice, including outlet structures, embankments, spillways, settling basins, grade control structures, conveyance channels, etc.

4) ☐ Construction drawing(s) showing locations of Runoff Reduction practices; and design, material specifications and installation details

Comments:

SWPPP Deficiencies as checked below:

1) ☐ Post-construction maintenance schedule to ensure continuous and effective operation of each post-construction stormwater control practice, including monitoring and maintenance frequency, identification of responsible parties, description of applicable easements, vegetative requirements, access and safety issues, and testing and disposal of sediments as they are removed

2) ☐ Weekly or twice-weekly inspection checklist identifying measures to be inspected by a qualified site inspector

3) ☐ Request to disturb greater than five acres at any given time including justification for disturbance, additional erosion and sediment control measures to mitigate disturbance, phasing plan, cuts and fills plan, and total acreage to be disturbed in each phase

4) ☐ Documentation of downstream analysis or discharge to fifth-order stream to request waiving control of Channel Protection Volume, Overbank Flood Control or Extreme Flood Control

5) ☐ Identification of any stormwater management practices that deviate from the *New York State Stormwater Management Design Manual*, reason for the deviation and demonstration that the alternative practice or deviation is equivalent to the technical standard

Comments:

Checklist is in accordance with requirements from GP-0-10-001. SWPPP review should be completed in accordance with additional requirements associated with most current version of the permit.

Appendix I: Project Start Up Form

SWPPP INSPECTION PROJECT START UP FORM

General Information:

Project Name/Location: _____ Date: _____

NYSCC Staff Present: _____

NYSCC Project Manager _____

Contractor: _____ _____

Point of Contact: _____ Phone: _____

Email: _____

Type of Construction: _____

Estimated Start of Construction: _____ Estimated Completion: _____

Electronic SWPPP Available? _____

SWPPP Inspector _____ Phone: _____

Email: _____

Forms:

- [ ] SWPPP Onsite
- [ ] General Permit Onsite
- [ ] MS4 Acceptance Form
- [ ] DEC Permit Acknowledgement Letter — Permit No. NYR1
- [ ] NOI
  - [ ] Owner Signature
  - [ ] Preparer Signature
- [ ] Owner/Operator Signed Certification
- [ ] Contractor/Subcontractor Certification Statements
  - [ ] Trained Contractor Designated
  - [ ] Trained Contractor Certification Cards

Appendix J: SWPPP Compliance Inspection Form

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER

Department of Environmental Conservation

New York State Department of Environmental Conservation

Construction Site Inspection Report for SPDES MS4 General Permit GP-0-24-001

Project Name:		Date:	
Project Location:		Weather:	
Permit # (if any): **NYR**	Contacted: ☐Yes ☐No	Entry Time:	Exit Time:
Name of SPDES Permittee:		Inspection Type:	☐NOT ☐ Complaint
Phone Number(s):			☐ Compliance ☐ Referral
On-site Representative(s) and Company(s):		MS4 Operator Name:	
		MS4 Permit ID: NYR20A	

SPDES Authority

	Yes	No	N/A		Citation
1.	☐	☐	☐	Does the project have permit coverage?	GP-0-20-001: I.A & II. B
2.	☐	☐	☐	Is a copy of the NOI and Acknowledgment Letter available on site and accessible for viewing?	GP-0-20-001: II.D.2
3.	☐	☐	☐	Is a copy of the MS4 SWPPP Acceptance Form available on site and accessible for viewing?	GP-0-20-001: II.D.2
4.	☐	☐	☐	Is an up-to-date copy of the signed SWPPP retained at the construction site?	GP-0-20-001: II.D.2. & III.A.4
5.	☐	☐	☐	Is a copy of the SPDES General Permit retained at the construction site?	GP-0-20-001: II.D.2
6.	☐	☐	☐	Does the NOI accurately report the number of acres to be disturbed?	GP-0-20-001: II.B.4

SWPPP Content

	Yes	No	N/A		Citation
7.	☐	☐	☐	Does the SWPPP describe and identify the erosion and sediment control measures to be employed?	GP-0-20-001: III.B.1.e
8.	☐	☐	☐	Does the SWPPP provide an inspection schedule and maintenance requirements for the E&SC measures?	GP-0-20-001: III.B.1.i
9.	☐	☐	☐	Does the SWPPP describe and identify the stormwater management practices to be employed?	GP-0-20-001: III.B.2
10.	☐	☐	☐	Does the SWPPP identify the contractor(s) and subcontractor(s) responsible for each measure?	GP-0-20-001: III.A.6
11.	☐	☐	☐	Does the SWPPP identify at least one trained individual from each contractor(s) and subcontractor(s) companies?	GP-0-20-001: III.A.6
12.	☐	☐	☐	Does the SWPPP include all the necessary Contractor Certification Statements and signatures?	GP-0-20-001: III.A.6
13.	☐	☐	☐	Is the SWPPP signed by the permittee?	GP-0-20-001: VII.H.2
14.	☐	☐	☐	Is the SWPPP prepared by a qualified professional (if post-construction stormwater management required)?	GP-0-20-001: III.A.3
15.	☐	☐	☐	Do the SMPs conform to the Enhanced Phosphorus Removal Standards (projects in TMDL watersheds)?	GP-0-20-001: III.B.3

Recordkeeping

	Yes	No	N/A		Citation
16.	☐	☐	☐	Are self-inspections performed as required by the permit (weekly, or twice weekly for >5 acres disturbed)?	GP-0-20-001:IV.C.2.a. & b
17.	☐	☐	☐	Are the self-inspections performed and signed by a qualified inspector and retained on site?	GP-0-20-001:II.C.2.,IV.C.6 & VII.H.3
18.	☐	☐	☐	Do the qualified inspector's reports include the minimum reporting requirements?	GP-0-20-001: IV.C.4
19.	☐	☐	☐	Do inspection reports identify corrective measures that have not been implemented or are recurring?	GP-0-20-001: IV.C.5

Visual Observations

	Yes	No	N/A		Citation
20.	☐	☐	☐	Are all erosion and sediment control measures installed properly?	GP-0-20-001: VII.L
21.	☐	☐	☐	Are all erosion and sediment control measures being maintained properly?	GP-0-20-001: IV.A.1
22.	☐	☐	☐	Was written authorization issued for any disturbance greater than 5 acres?	GP-0-20-001: II.D.3
23.	☐	☐	☐	Have stabilization measures been implemented in inactive areas per Permit (>5acres) or ESC Standard?	GP-0-20-001: II.D.3.b & III.B.1.f
24.	☐	☐	☐	Are post-construction stormwater management practices constructed/installed correctly?	GP-0-20-001: III.B.2
25.	☐	☐	☐	Has final site stabilization been achieved and temporary E&SC measures removed prior to NOT submittal?	GP-0-20-001: V.A.2
26.	☐	☐	☐	Was there a discharge from the site on the day of inspection?	
27.	☐	☐	☐	Is there evidence that a discharge caused or contributed to a violation of water quality standards?	ECL 17-0501, 6 NYCRR 703.2 & GP-0-20-001: I.D

Water Quality Observations

Describe the discharge(s): location, source(s), impact on receiving water(s), etc.

Describe the quality of the receiving water(s) both upstream and downstream of the discharge:

Describe any other water quality standards or permit violations:

Additional Comments:

☐ Photographs attached

Overall Inspection Rating: ☐ Satisfactory ☐ Marginal ☐ Unsatisfactory	
Name/Agency of Lead Inspector:	Signature of Lead Inspector:
Names/Agencies of Other Inspectors:	

Appendix K: Construction Project Inventory

Construction Site Inventory

			Receiving Waterbody							
Construction Start Date	Construction End Date	Location of Construction	Name	Class	WI/PWL Segment ID	Project Prioritization[1]	SPDES Approval	SWPPP Approval Data	Compliance Inspection History	Current Project Status

[1] High Priority Sites:

A. Sited with direct conveyance (e.g., channel, ditch, stormwater) to a surface water of the Stat that is

(1) Listed in Appendix C of the MS4 General Permit with silt/sediment, phosphorus, or nitrogrn as the pollutant of concert (refer to NYSDEC Stormwater Interactive Map for referecne).

(2) Classified as AA-S, AA, or A (refer to NYSDEC Stormwater Interactive Map for reference)

(3) Classified with a trout (T) or trout spawning (TS) designation (refer to NYSDEC Stormwater Interactive Mape for reference).

B. Greater than five (5) acres of disturbed earth at any one time

C. Earth disturbance within one hundred (100) feet of any lake or pond.

D. Earth disturbance within fifty (50) feet of any rivers or streams.

NYSDEC Stormwater Interactive Map

Appendix L: SWM Maintenance Checklists

2.7. Bioretention

Areas of Bioretention

Key areas to inspect for Bioretention include the following:

- BR 1. Drainage Area
- BR 2. Inlets
- BR 3. Bioretention Ponding Area
- BR 4. Vegetation
- BR 5. Outlets

Note: The category of Bioretention includes:

- Bioretention cells – areas of soil, mulch, and vegetation that treat runoff
- Dry swales – long, linear bioretention cells, sometimes with check dams along a mildly sloping swale
- Rain gardens – usually small-scale bioretention practices on residential or small commercial properties

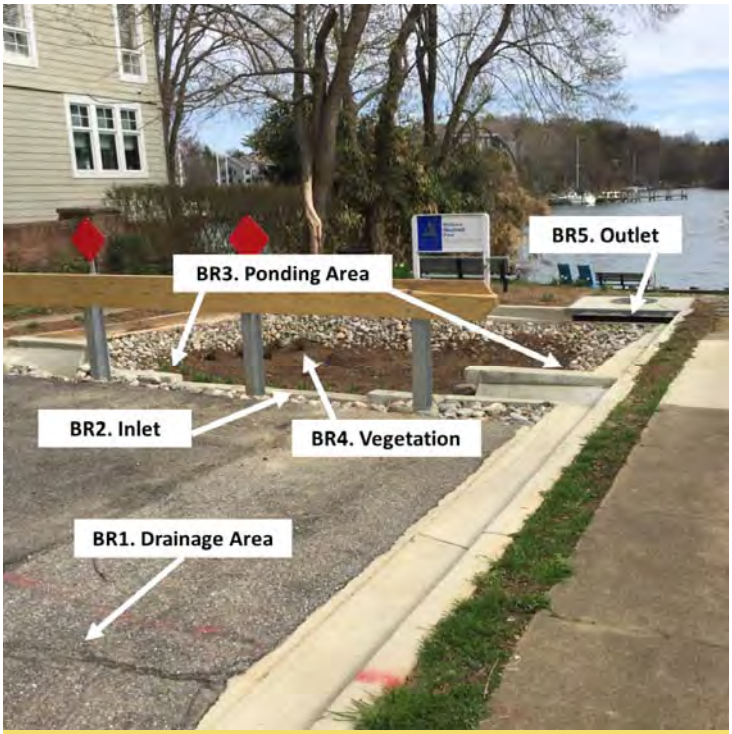

Figure 2.7.1. Key Areas for Level 1 Inspection of Bioretention

- Stormwater planters – usually in more urban settings, with soil and plants in a concrete box that receives roof runoff or perhaps other water from the site
- Tree pits – also a more urban practice where the bioretention is confined within some sort of box (e.g., concrete) and places along road curbs or other areas to treat runoff

For the purposes of this chapter, the term “Bioretention cell” will be used to generally describe these practices.

Bioretention Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (BR1), Inlets (BR2), Bioretention Ponding Area (BR3), Vegetation (BR4), and Outlets (BR5). This inspection should be conducted on a regular basis, with an early spring inspection to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow. An inspection during the growing season or in the early fall is also recommended to check on the health of vegetation.

BR 1. Drainage Area

Description: The drainage area sends runoff to and is uphill from the Bioretention cell. When it rains, water runs off and flows to the Bioretention cell and ponds within the cell temporarily (usually for no more than 48 hours). Sometimes, the runoff will contain dirt, grit, grass clippings, oil, or other substances that SHOULD NOT be directed to the Bioretention area.

Instruction: Look for areas that are uphill from the Bioretention cell. Consult **Table 2.7.1** below.

Table 2.7.1 BR Drainage Area

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR 2. Inlets

Description: The inlets to a Bioretention cell are where water flows into the cell. Depending on the design, water can flow in through:

- Curb cuts or openings in a parking lot or roadway
- Pipes or ditches that carry water into the Bioretention cell from the drainage area
- Flow directly over the land surface (known as “sheetflow”), sometimes across a strip of rock or stone

Figure 2.7.2 Bioretention Cell Inlets

CSN, 2013

Instruction: Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice. Consult **Table 2.7.2** below for possible problems.

Table 2.7.2 BR Inlets

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR 3. Bioretention Ponding Area

Description: The ponding area fills up with water during a rainstorm. If you picture the Bioretention cell as a bathtub, there is the *bottom* (usually flat surface), *side slopes* (areas that slope down to the bottom from the surrounding ground), and *berms or structures that control the depth to which water ponds.*

Instruction: Examine the entire Bioretention surface and side slopes. Consult the table below for possible problems.

Table 2.7.3 BR Ponding Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell. ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that Bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR 4. Vegetation

Description: The health of vegetation within the Bioretention cell is perhaps the most critical maintenance item for the property owner or responsible party. Many Bioretention cells become overgrown, and "desirable" vegetation becomes choked out by weeds and invasive plants. It is important to know what the Bioretention cell is supposed to look like and what plants seem to be thriving or doing poorly. Periodic maintenance of vegetation will prevent larger problems that are more difficult and costly to manage.

Instruction: Examine all Bioretention cell vegetation. Consult the table below for possible problems.

Table 2.7.4 BR Vegetation

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell, bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell. If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR 5. Outlets

Description: Outlets are where water leaves the Bioretention cell when there is too much ponded water. There are various ways that outlets are configured. They can be a yard drain type of structure in the Bioretention cell itself or a rock weir where water flows during large storms. Many Bioretention practices have an underdrain, which is like a French drain, that helps the Bioretention cell drain properly after storms. The underdrain pipe may “daylight” (come to the ground surface) at some point downhill from the Bioretention cell.

Instruction: Examine outlets that release water out of the Bioretention cell. Consult the table below for possible problems.

Table 2.7.5 BR Outlets

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

3.7. Bioretention – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Bioretention are:

- Standing water, clogged media
- Vegetation management
- Bioretention does not conform to original design plan in surface area or storage.
- Severe erosion of filter bed, inlets, or around outlets
- Significant sediment accumulation, indicating an uncontrolled source of sediment

Table 3.7.1 Level 2 Inspection: BIORETENTION
NOTE: Key Source for this Information *(CSN, 2013)*

Recommended Repairs	Triggers for Level 3 Inspection
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have bad soil media, try scraping off top 3 inches of media and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: • Clogged underdrain? • Filter fabric between soil media and underdrain stone? • Need to install underdrain if not present? • Too much sediment/grit washing in from drainage area? • Too much ponding depth? • Improper soil media?	• Soil media is clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice.

Observed Condition: Vegetation is sparse or out of control	
Condition 1: Original design planting plan seems good but has not been maintained, so there are many invasives and/or dead plants Will require some horticultural experience to restore vegetation to intended condition by weeding, pruning, removing plants, and adding new plants. Condition 2: Original design planting plan is unknown or cannot be actualized A landscape architect or horticulturalist will be needed to redo the planting plan. Will likely require analysis of soil pH, moisture, organic content, sun/shade, and other conditions to make sure plants match conditions. Plan should include invasive plant management and maintenance plan to include mulching, watering, disease intervention, periodic thinning/pruning, etc.	• Vegetation deviates significantly from original planting plan; Bioretention has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice.
Observed Condition: Bioretention does not conform to original design plan in surface area or storage	
Condition 1: Level 2 Inspection reveals that practice is too small based on design dimension, does not have adequate storage (e.g., ponding depth) based on the plan, and/or does not treat the drainage area runoff as indicated on the plan Small areas of deviation can be corrected by the property owner or responsible party, but it is likely that a Qualified Professional will have to revisit the design and attempt a redesign that meets original objectives or that can be resubmitted to the municipality for approval.	• More than a 25% departure from the approved plan in surface area, storage, or drainage area; sometimes less than this threshold at the discretion of the Level 2 inspector.
Observed Condition: Severe erosion of filter bed, inlets, or around outlets	
Condition 1: Erosion at inlets The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a more non-erosive lining and/or to extend the lining further down to where inlet slopes meet the Bioretention surface. If problem persists, analysis by a Qualified Professional is warranted. Condition 2: Erosion of Bioretention filter bed This is often caused by “preferential flow paths” through and along the Bioretention surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads). Condition 3: Erosion on side slopes Again, the issue is likely linked with unanticipated flow paths down the side slopes (probably overland flow that concentrates as it hits the edge of the slope). For small or isolated areas, try filling, compacting, and re-establishing healthy ground cover vegetation. If the problem is more widespread, further analysis is required to determine how to redirect the flow.	• Erosion (rills, gullies) is more than 12 inches deep at inlets or the filter bed or more than 3 inches deep on side slopes. • If the issue is not caused by moving water but some sort of subsurface defect. This may manifest as a sinkhole or linear depression and be associated with problems with the underdrain stone or pipe or underlying soil.
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of Bioretention soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by an improper construction sequence (drainage area not fully stabilized prior to installation of Bioretention soil media) or another chronic source of sediment in the drainage area. Augering several holes down through the media can indicate how severe the problem is; often the damage is confined to the first several inches of soil media. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long as the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the Bioretention surface area. • “Hard pan” of thin, crusty layer covers majority of Bioretention surface area and seems to be impeding flow of water down through the soil media. • New sources of sediment seem to be accumulating with each significant rainfall event.

2.5. Swales

Areas of Swales

- Key areas to inspect for swales include the following:
- SW 1. Drainage Area
- SW 2. Inlets
- SW 3. Swale Surface Area
- SW 4. Vegetation
- SW 5. Outlets

Note: The category of Swales includes:

- Vegetated Swale – shallow channel densely planted with variety of grasses, shrubs, and/or trees (also called bioswale or drainage swale)
- Wet Swale – a cross between a wetland and a swale, this linear system intercepts groundwater to maintain wetland vegetation

For the purposes of this chapter, the term “Swale” will be used to generally describe these practices.

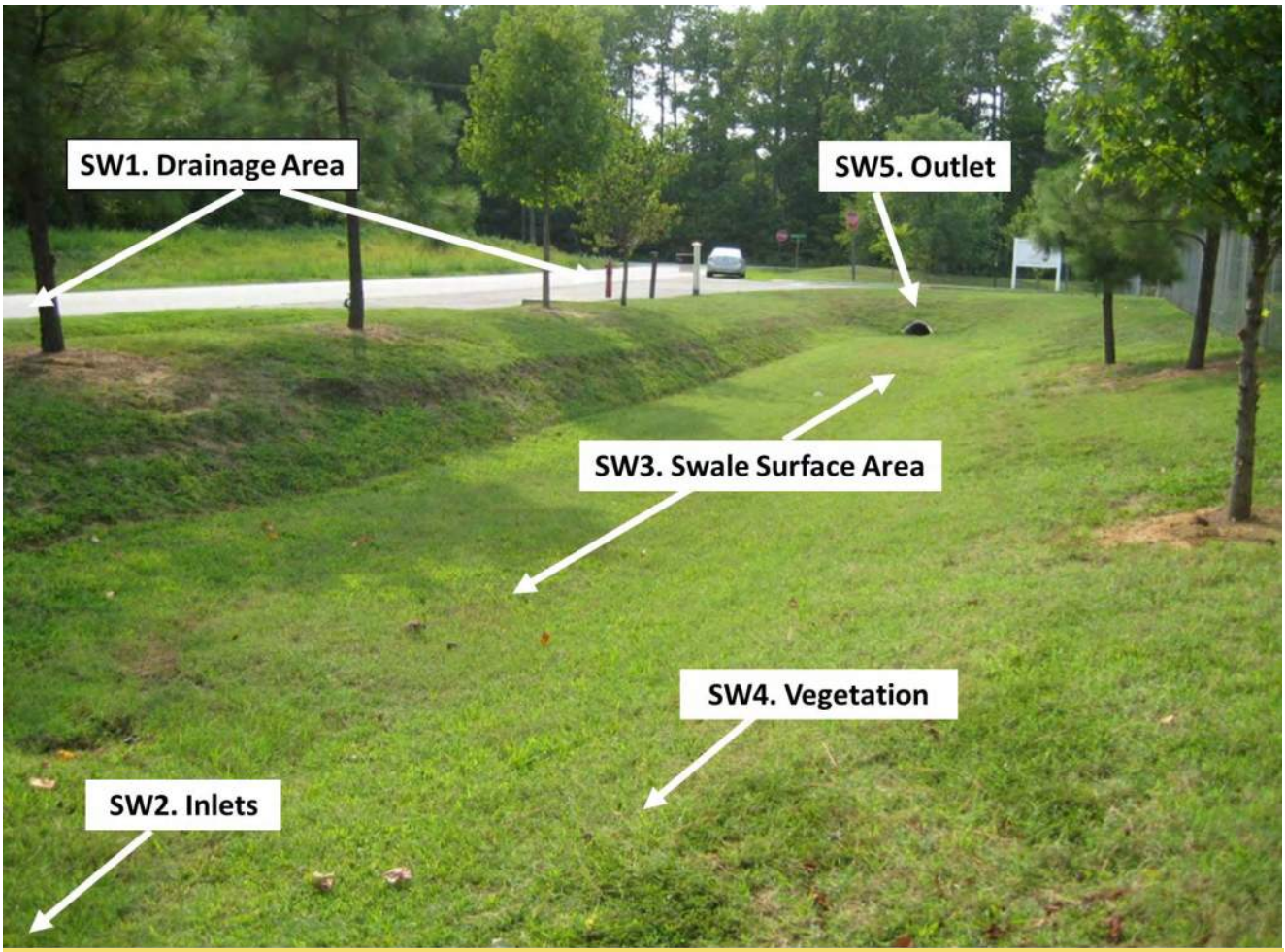

Figure 2.5.1 Key Areas for Level 1 Inspection of Swales Credit

Swale Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (SW1), Inlets (SW2), Swale Surface Area (SW3), Vegetation (SW4), and Outlets (SW5). This inspection should be conducted on a regular basis, with an early spring inspection to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow. An inspection during the growing season or in the early fall is also recommended to check on the health of vegetation.

SW 1. Drainage Area

Description: The drainage area sends runoff to and is uphill from the swale. When it rains, water runs off and flows to and along the swale.

Instruction: Look for areas that are uphill from the swale. Consult **Table 2.5.1** below.

Table 2.5.1 SW Drainage Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch or sod areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and add seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous.
	Kick-Out to Level 2 Inspection: Grass on edge of pavement continues to die off for unknown reasons. Swale edge may need to be replaced with other materials (e.g., stone diaphragm).
☐ Grass dying at edge of road	☐ Seed and mulch; add topsoil or compost if needed. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Grass on edge of pavement continues to die off for unknown reasons. Swale edge may need to be replaced with other materials (e.g., stone diaphragm).

SW 2. Inlets

Description: The inlets to a swale are where water flows in. Depending on the design, water can flow in through:

- Ditch, pipe, or curb opening at top of swale: This is the most common approach, where water enters the swale at the top.
- Along the entire edge of the swale: If the swale is along a roadway or parking lot, water may enter along the long side of the swale through defined curb openings or simply by water flowing into the swale from the pavement edge (known as “sheetflow”).

Instruction: Stand in the swale and look for all the places where water flows in. Consult **Table 2.5.2** below for possible problems.

Table 2.5.2 SW Inlets

Problem (Check if Present)	Follow-Up Actions
☐ Inlets or the swale edge are collecting grit, grass clippings, or debris or have grass/weeds growing. Some water may not be getting into the swale. The objective is to have a clear pathway for water to flow into the swale.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or opening). Parking lots will generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds, and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets or along the edge of the swale where water is supposed to enter. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the swale. ☐ Dispose of all material properly in an area where it will not re-enter the swale. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the swale.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion are present, or there is bare dirt that is washing into the swale.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying an erosion control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other:
	☐ Level 2 Inspection: Erosion is occurring at most of the inlets or along much of the swale edge. The inlet design may have to be modified.

SW 3. Swale Surface Area

Description: The swale surface area is the vegetated area where water flows during a storm and also the side slopes that slope down into the swale bottom. Depending on the design, the swale may also contain "check dams," which are small dams made out of earth, stone, wood, or other materials. The check dams slow down and temporarily pond water as it flows down the swale.

Instruction: Examine the entire swale surface and side slopes. Consult **Table 2.5.3** below for possible problems.

Table 2.5.3 SW Surface Area

Problem (Check if Present)	Follow-Up Actions
☐ Minor areas of sediment, grit, trash, or other debris are accumulating in the swale.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the swale. ☐ If removing the material creates a hole or low area, fill with good topsoil and add seed and straw to re-vegetate. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ If the swale is densely vegetated, it may be difficult to do the maintenance; check for excessive ponding or other issues described in this section to see if the accumulated material is causing a problem. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 3 inches deep and covers 25% or more of the swale surface. ☐ The source of sediment is unknown or cannot be controlled with simple measures.
 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows through the swale or on the slopes.	☐ Try filling the eroded areas with clean topsoil, and then seed and mulch to establish vegetation. ☐ If the problem recurs, you may have to use some type of matting, stone (e.g., river cobble), or other material to fill in eroded areas. ☐ If the erosion is on a side slope, fill with soil and cover with erosion-control matting or at least straw mulch after re-seeding.
	☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3 inches deep and seems to be an issue with how water enters and moves through the swale. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., "sinkhole") due to some underground problem.
☐ Water does not flow evenly down the length of the swale, but ponds in certain areas for long periods of time (e.g., 72 hours after a storm). The swale does not seem to have "positive drainage." Check during or immediately after a rain storm.	☐ If the problem is minor (just small, isolated areas), try using a metal rake or other tools to create a more even flow path; remove excessive vegetative growth, sediment, or other debris that may be blocking the flow. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Water ponds in more than 25% of the swale for three days or more after a storm. The issue may be with the underlying soil or the grade of the swale. ☐ Water ponds behind check dams for three days or more after a storm. Check dams may be clogged or not functioning properly.

Table 2.5.3 SW Surface Area	
Problem (Check if Present)	**Follow-Up Actions**
 ☐ Check dams (if present): water is flowing around the edges of check dams, creating erosion or sinkholes on the uphill or downhill side, or the check dams are breaking apart or breaching.	☐ If the problem is isolated to just a few check dams, try simple repairs. ☐ It is very important for the center of each check dam (where most of the water flows) to be lower (by at least several inches) than the edges of the check dams where they meet the side slopes. Also, the check dams should be keyed into side slopes so water does not flow between the check dam and side slope. ☐ Use a level to check the right check-dam configuration, as noted above. Repair by moving around stone, filling and compacting soil, or adding new material so that water will be directed to the center of the check dam instead of the edges. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Many check dams are impacted and/or the problem seems to be a design issue with height, spacing, shape, or materials used to construct them.

SW 4. Vegetation

Description: The health of vegetation within the swale is perhaps the most critical maintenance item for the property owner or responsible party. Many vegetated swales become overgrown, and “desirable” vegetation becomes choked out by weeds and invasive plants. It is important to know what the swale is supposed to look like and what plants seem to be thriving or doing poorly. Periodic maintenance of vegetation will prevent larger problems that are more difficult and costly to manage.

Instruction: Examine the swale vegetation. Consult **Table 2.5.4** below for possible problems.

Table 2.5.4 SW Vegetation

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation is too overgrown to access swale for maintenance activities	☐ Mow or bush-hog the path. ☐ Other:
 ☐ Vegetation requires regular maintenance: pulling weeds, removing dead and diseased plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, block flow, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole swale, bush-hog the entire area before seed heads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Replant with species that are aesthetically pleasing and seem to be doing well in the swale. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.
☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the swale. If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., in residential yards), this task will likely require a landscape design professional or horticulturalist.

SW 5. Outlets

Description: These are where water leaves the swale when it fills up or where water reaches the downstream end of the swale. There may be a small stone apron or rock dam here or even an outlet grate.

Instruction: Examine outlets that release water out of the swale. Consult **Table 2.5.5** below for possible problems.

Table 2.5.5 SW Outlets

Problem (Check if Present)	Follow-Up Actions
☐ Outlet is obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the swale. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

3.5. Swales – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Swales are:

- Standing water, swale not draining properly (not applicable to wet swales)
- Severe erosion around or under check dams
- Large area of vegetation overrun with weeds and/or invasive species
- Severe erosion at outlet that requires redesign

Table 3.5.1 Level 2 Inspection: SWALE

Recommended Repairs	Triggers for Level 3 Inspection
Observed Condition: Water Stands on Surface for More than 72 Hours after Storm	
Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have compacted soil, try scraping off top 3 to 6 inches of soil and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: Bad or compacted soil Filter fabric on the swale bottom Too much sediment/grit washing in from drainage area? Too much ponding depth? Longitudinal slope is too flat?	• Soil is overly compacted or clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice (e.g., not enough slope down through the swale).
Observed Condition: Vegetation is predominantly weeds and invasive species	
For a small area, weed and dig up invasive plants. Replant with natives or plants from original planting plan. If longer than 100 feet, develop a new planting plan and have it professionally reviewed.	• Vegetation deviates significantly from original planting plan; swale has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice. • For large area, hire a professional to develop a grading plan and develop a planting plan.

Observed Condition: Severe erosion of check dams, inlets, swale bottom, or side slopes	
	• Erosion (rills, gullies) is more than 12-inches deep at inlets or the swale bottom or more than 3-inches deep on side slopes. • Flow paths from the drainage area are higher than expected, such that the swale needs to be redesigned to handle higher flow rates and velocities.
Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment	
Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of swale soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more This can be caused by improper construction sequence (drainage area not fully stabilized prior to installation of the swale) or another chronic source of sediment in the drainage area. Augering several holes down along the swale can indicate how severe the problem is; often the damage is confined to the first several inches of soil. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the swale surface area. • “Hard pan” of thin, crusty layer covers majority of swale surface area and seems to be impeding flow of water along the swale. • New sources of sediment seem to be accumulating with each significant rainfall event.

Appendix M: Wet Weather Monitoring Forms

NEW YORK STATE | Department of Environmental Conservation

Storm Event Data Form for SPDES MS4 General Permit, GP-0-24-001

Do not submit this form to the Department; keep this form with the municipal facility's SWPPP and in the MS4 Operator's SWMP Plan.

Permit Number:

N	Y	R	2	0	A			

Facility Name:

Contact First Name:

Contact Last Name:

Contact Phone:

Contact Email:

Storm Event Date:

Storm Duration (in hours):

Rainfall Measurement from Storm Event (in inches):

Date of Last Measurable Storm Event:

Duration Between Storm Event Sampled and End of Previous Measurable Storm (in hours):

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Operator First Name (please print or type)

Facility Operator Last Name (please print or type)

/ /

Date

Signature

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Visual Monitoring Form MS4 GP-0-24-001

All high priority municipal facilities covered under the MS4 GP-0-24-001 must perform Visual Monitoring twice a permit term, separated by a minimum of one (1) year. Please see the permit Part VI.F/VII.F for additional requirements. This form is part of the facilities records and should be retained onsite with the facility's Stormwater Pollution Prevention Plan. ***Please do not submit this form to the Department.***

MS4 Operator Permit ID

Facility Name

Outfall Number

Examiner's Name

Examiner's Title

Reporting Year

Rainfall Amount

Qualifying Storm? ◯Yes ◯No

Runoff Source? ◯Rainfall ◯Snowmelt

Date/Time Collected __ / __ / __ __ : __ __ AM / PM

Date/Time Examined __ / __ / __ __ : __ __ AM / PM

1. Does the stormwater appear to be colored? ..... ◯Yes ◯No

If yes, describe

2. Is the stormwater clear or transparent? ..... ◯Yes ◯No

If yes, which of the following best describes the clarity of the stormwater: ..... ◯Clear ◯Milky ◯Opaque

3. Can you see a rainbow sheen effect on the water surface?..... ◯Yes ◯No

If yes, which best describes the sheen?..... ◯Rainbow Sheen ◯Floating Oil Globules

4. Does the sample have an odor? ..... ◯Yes ◯No

If yes, describe

5. Is there something floating on the surface of the sample? ..... ◯Yes ◯No

If yes, describe

6. Is there something suspended in the water column of the sample? ..... ◯Yes ◯No

If yes, describe

7. Is there something settled on the bottom of the sample?..... ..... ◯Yes ◯No

If yes, describe

8. Is there foam or material forming on the top of the sample surface?..... ◯Yes ◯No

If yes, describe

Detail any concerns, corrective actions taken and any other indicators of pollution present in the sample:

Appendix N: Municipal Facility Assessment Form

NEW YORK STATE | Department of Environmental Conservation

NO EXPOSURE CERTIFICATION

For High Priority Municipal Facilities

in SPDES MS4 General Permit, GP-0-24-001

The completed No Exposure Certification must be documented in the SWMP Plan.
Please do not submit this form to the Department unless requested.

I. Owner/Facility Information

Owner/Operator Name:		
Mailing Address:	City/State/Zip:	
Contact Name:	Phone No.:	
Facility Name:		
Street Address:	City/State/Zip:	
County:	Latitude:	Longitude:

II. Exposure Checklist

	Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) If you answer "Yes" to any of these questions (1) through (11), you are not eligible for no exposure.	YES	NO
1	Using, storing or cleaning machinery or equipment, and areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater		
2	Materials or residuals on the ground or in stormwater inlets from spills/leaks		
4	Material handling equipment (except adequately maintained vehicles)		
5	Materials or products during loading/unloading or transporting activities		
6	Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to stormwater does not result in the discharge of pollutants)		
7	Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers		
8	Materials or products handled/stored on roads or railways owned or maintained by the discharger		
9	Waste material (except waste in covered, non-leaking containers [e.g., dumpster])		

III. Certification

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from SPDES stormwater permitting. I certify under penalty of law that there are no discharges of storm water contaminated by exposure to industrial activities or materialsfrom the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)). I understand that I am obligated to submit a no exposure certification form upon request to the NPDES permitting authority or to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the SPDES permitting authority, or MS4 Operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request.

Printed Name:	Title/Position:
Signature:	Date:

NEW YORK STATE Department of Environmental Conservation	**Municipal Facility Assessment Form For SPDES MS4 General Permit, GP-0-24-001**

Assessments must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit (GP-0-24-001).

MS4 Permit ID:	MS4 Operator Name:	
Facility Name:	Facility Type:	Date:
Weather Conditions:		
Is stormwater runoff present during this assessment? ☐ Yes ☐ No		
Comments:		

General		**Yes**	**No**
1	Is this a high priority municipal facility?	☐	☐
2	If this is a high priority municipal facility, does the facility qualify for a No Exposure Certification?	☐	☐
3	If this is a high priority municipal facility, is there a completed SWPPP available?	☐	☐
4	Does the facility have any MS4 outfalls?	☐	☐
5	Does the facility have any interconnections?	☐	☐
6	Does the facility have any municipal facility intraconnections?	☐	☐
Comments:			
Good Housekeeping		**Yes**	**No**
7	Are paved surfaces free of trash, sediment, and/or debris?	☐	☐
8	Date the paved area was last swept or vacuumed.	☐	☐
9	Do outdoor waste receptacles have covers?	☐	☐
10	Are the waste receptacles emptied on a regular basis?	☐	☐
11	Are there signs of leaks, contaminants or overfilling at the waste receptacle area?	☐	☐
12	Are the following facility areas free of accumulated trash, sediment, debris, contaminants, and spills:	☐	☐
	- Salt storage areas	☐	☐
	- Container storage areas	☐	☐
	- Maintenance areas	☐	☐

	- Staging areas	☐	☐
	- Material stockpile areas	☐	☐
Comments:			

Vehicle and Equipment Areas		☐ N/A	Yes	No
13	Are vehicle/equipment parked indoors or under a roof?		☐	☐
14	Are vehicles/equipment washed in only designated areas?		☐	☐
15	Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?		☐	☐
16	Is all wash water treated in an oil water separator prior to discharge?		☐	☐
17	Is all wash water managed so it does not enter the MS4?		☐	☐
Comments				

Vehicle/Equipment Maintenance		☐ N/A	Yes	No
18	Is equipment stored under shelter or elevated and covered?		☐	☐
19	Are fluids drained over a drip pan or pad?		☐	☐
20	Are funnels or pumps used when transferring fluids?		☐	☐
21	Are waste rags and used absorbent pads disposed of properly?		☐	☐
22	Are any vehicles and/or equipment leaking fluids?		☐	☐
23	Are drip pans immediately placed under leaks?		☐	☐
24	Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?		☐	☐
25	Are vehicles inspected daily for leaks?			
Comments:				

Fueling areas		☐ N/A	Yes	No
26	Is fueling performed under a canopy or roof?		☐	☐
27	Are spill cleanup materials available at the fueling area?		☐	☐
28	Are breakaway valves used on fueling hoses?		☐	☐
29	Is the fueling handle lock disconnected so the operator must attend the fueling?		☐	☐
30	Is stormwater runoff from fueling area treated in an oil/water separator?		☐	☐
31	Is the fueling automatic stop inspected regularly to ensure it is working properly?		☐	☐
32	Are all fuel deliveries monitored?		☐	☐
Comments:				

Salt Storage Piles or Pile Containing Salt		☐ N/A	Yes	No
33	Is salt stored in a salt storage building or under a roof?		☐	☐
34	Are controls in place to minimize spills while adding or removing material from the pile?		☐	☐
35	Are salt spills cleaned up promptly?		☐	☐
36	Is overflow and tracked salt removed promptly from loading areas?		☐	☐
37	Is stormwater draining away from the salt pile directed to a vegetated filter area		☐	☐
Comments:				
Fluids Management		☐ N/A	Yes	No
38	Are all drums and containers of fluids stored with proper cover and containment?		☐	☐
39	Are fluids stored in appropriate containers and/or storage cabinets?		☐	☐
40	Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?		☐	☐
41	Are Material Safety Data Sheets (MSDS/SDS) readily available?		☐	☐
42	Are all containers that are stored free of leaks or deposits?		☐	☐
43	Are containers of product inspected regularly?		☐	☐
44	Is used oil and antifreeze stored indoors and/or on spill containment pallets?		☐	☐
45	Is used oil and antifreeze properly disposed of or recycled?		☐	☐
Comments:				
Lead Acid Batteries		☐ N/A	Yes	No
46	Are lead-acid batteries stored indoors on spill containment pallets or in bins?		☐	☐
47	Are intact batteries stored on an acid-resistant rack or tub?		☐	☐
48	Are cracked or leaking batteries stored in labeled, closed, leak-proof containers?		☐	☐
49	Is the date each battery was placed in storage recorded?		☐	☐
50	Are batteries stacked more than 5 high?		☐	☐
51	Are batteries inspected regularly for leaks?		☐	☐
Comments:				
Spill Prevention and Response Procedures		☐ N/A	Yes	No
52	Are vehicles inspected daily for leaks?		☐	☐

53	Is spill control equipment and absorbents readily available?	☐	☐
54	Are emergency phone numbers posted in conspicuous areas?	☐	☐
55	Are spills contained and cleaned up immediately?	☐	☐
Comments:			

General Material Storage Areas	☐ N/A	Yes	No
56	Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?	☐	☐
57	Are all material stockpiles within containment structures (e.g., concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?	☐	☐
58	Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?	☐	☐
59	Are outdoor containers covered?	☐	☐
60	Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?	☐	☐
61	Are spills of material or debris cleaned up promptly?	☐	☐
62	Are used tire storage piles placed away from storm drains or conveyances?	☐	☐
63	Are tires recycled frequently to keep the number of stored tires manageable?	☐	☐
Comments:			

Stormwater Management		Yes	No
64	Are employees trained on the municipal facility procedures?	☐	☐
66	Are BMPs and treatment structures working as designed?	☐	☐
67	Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?	☐	☐
68	Catch basins should be cleaned in accordance with the timeframes listed in Part VI.F.3.c.iii. / Part VII.F.3.c.iii, depending on the MS4 Operator type. Based on this, do any catch basins need to be cleaned?	☐	☐
69	Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?	☐	☐
70	Are rooftop drains directed to areas away from pavement?	☐	☐
Comments:			

Erosion and Sediment Controls		Yes	No
71	Are soil stabilization measures (e.g., seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?	☐	☐
72	Are natural buffers maintained around surface waters?	☐	☐
73	Are flow velocity dissipation devices in place at monitoring locations and channel outlets (rock riprap, stone check dams, concrete baffles)?	☐	☐
74	Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?	☐	☐

Comments:			
Corrective Actions and Comment			
Describe Inspection findings and if necessary, the corrective actions taken			
Inspector Signature		Date:	